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Address

THERAPEUTIC PROGRESS *

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"The knowledge of simple druggs is a study so agreeable and so exalted in its own nature that it has been the pursuit of the finest genius's in all ages." Thus Monsieur Pomet, chief druggist to Louis XIV, opens the preface of his book, "The History of Druggs," which was published in 1694, and "done into English from the originals" in 1725. As he further assures us that even princes have deigned to undertake such an agreeable study, I think that we may profitably spend a short time in considering some phases of the history of materia medica and therapeutics, and especially the changes they underwent during the nineteenth century, together with the factors which have tended to bring about the present conditions. The term "materia medica" is very ancient, having been introduced by Pedarius Dioscorides (40-90 A. D.), the most important writer on pharmacology of antiquity.

SURVEY OF THE HISTORY OF THERAPEUTICS AND MATERIA MEDICA

It is manifestly impossible in the short time at my disposal to attempt anything like a comprehensive history of our materia medica; and even were it done it would hardly be profitable, as a list of the remedies employed by our ancestors would comprise substances not only peculiar and even amusing in the light of our present knowledge, but would include many disgusting remedies as well. Their use can be understood and appreciated only when studied in connection with the various theories of disease then prevailing; theories which were formed under the influence of this speculative school of medicine or that and founded not on observation but on ignorance and superstition.

In considering the period we must clearly keep in mind the extent to which medical practice was handicapped and the difficulties under which the early practitioner worked.

Let us imagine ourselves, if we can, to be suddenly deprived of the sciences which the nineteenth century gave us, such as pathology and bacteriology, and such diagnostic aids as the modern microscope, clinical thermometer and the stethoscope, together with all the knowledge of disease which has been gained by their aid. Imagine all these gone and ourselves practicing in the last decade of the eighteenth century; who among us would dare to say that we would do better than our forefathers did?

No, the physician of 1908 has no reason to be ashamed of the history of his profession. His forefathers worked with the same sincerity and with the same lofty aim in view that he does to-day, but they were hampered by a lack of that scientific knowledge which the man of to-day enjoys and which has been gained, not through his own efforts, but through the toil and thought of the men of old.

What, then, was the condition of materia medica and therapeutics at the end of the eighteenth century? This may be most clearly described by the word "overmedication." An immense variety of drugs were used and they were given in such large doses as not only to produce their physiologic effects, but, in many cases, toxic symptoms as well. The drugs which were in greatest favor, perhaps, were those which aided elimination, such as cathartics, emetics and diaphoretics. Still another method of treatment which had the same object in view was that of venesection. This was carried out to an enormous degree and in all sorts of pathologic conditions.

To illustrate the use of venesection, let me quote from a standard text-book of medicine in use at that time. Benjamin Rush, professor of institutes and practice of medicine and of clinical practice in the University of Pennsylvania, in 1809, published a volume of the works of Thomas Sydenham, the great English physician who lived in the seventeenth century. Dr. Rush revised this work so as to make it suitable for use in the medical schools of his own day. In discussing the treatment of pleurisy, Sydenham advised bleeding, ten ounces being taken on four successive days, adding that in grown persons he seldom found that it is necessary to take less than forty ounces of blood. Rush, in commenting, says that in the United States it is often necessary to take more than double the amount that Sydenham mentions. Other examples might be quoted from Sydenham's chapter on the treatment of quinsy and also of pneumonia.

This was, indeed, the age of heroic medicine. Small wonder that thinking persons were led to question whether the treatment did not kill more often than the disease, and that Addison wrote: "We may lay it down as an axiom that when a nation abounds in physicians it grows thin in people." And again he says: "I must confess for the good of my native country, I could wish there might be a suspension of physics for some years that our kingdom which has been so much exhausted by the wars might have leave to recruit itself."

What a change had taken place during those centuries which had transpired since the time that Pluto complained to Jupiter that Æsculapius was depopulating the world of shades by his wonderful success in the healing art!

When, however, we examine the materia medica of that period we are at once struck by the comparatively small number of present-day drugs which were employed. If we attempt to sift out of the vast array of remedies only those which we to-day consider of importance, the number is not great. Most of the heavy metals are present, being represented by mercury, iron, arsenic, antimony and others and dating back to the dawn of medicine. From about the same period, and probably derived from Egyptian or Chinese medicine, we have opium and squills. Ipecac and cinchona are much more recent, dating from the seventeenth century, while digitalis, nux vomica and aconite appeared in the eighteenth. Belladonna was known mainly as a poison, being little used in medicine. Alcohol, of course, must not be forgotten, as in an impure form it was used from the earliest times, having, according to Milton, been given by the gods, as it was

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* Address delivered at the opening session of the Department of Medicine and Surgery, Sept. 29, 1908.

> Bacchus that first from out the purple grape
> Crushed the sweet poison of misused wine.[1]

In 1400 a Benedictine monk obtained the alcohol almost free from water and it was sold by the apothecaries to prolong life and restore youth, under the name of "aqua vitæ." As Arnold of Villanova (1235 to 1312) said: "Mankind has grown old and has become feeble: therefore, God has given him this water of life that he may grow young again."

This short list of about a dozen drugs contains practically all of those which we to-day would consider in the first rank, but although our forefathers possessed so few of our important remedies (mixed in with the hundreds of others which we have discarded), they made the best of the few they had; cinchona was used by the pound; opium to seminarcosis; and calomel earned for itself the title "the Samson of the remedies," because, as some one pointed out, it had slain its thousands.

Largely as a result of this abuse of drugs there set in immediately after this period a reaction against this hypermedication and therapeutic interference. Among the many influences which aided in the purification of the therapeutic art may be mentioned, first of all, the universal growth in knowledge as shown by the great strides which were made along general scientific lines. But there are three factors to which I want especially to call your attention. First, in point of time came the introduction of homeopathy. There can be no doubt but that this school performed a great service to medicine in clearly demonstrating of what recuperative powers Nature is capable if she is not meddled with, and its influence went a long way toward emancipating medicine from the state of polypharmacy into which it had fallen. The second important factor was the development of pathologic histology, in that it gave us for the first time a definite idea of the nature of disease and of the morbid changes which the body undergoes. It may even be seriously questioned whether under its influence the pendulum did not swing too far in the other direction, as it tended to produce a loss of confidence in the healing power of medicines.

This nihilistic state of mind was still further accentuated under the influence of Skoda and his followers, who made diagnosis the chief aim in medicine. The whole object of the physician was diverted from therapeusis to diagnosis, so that the former became almost a subject of derision. Nevertheless, although pathology and the science of physical diagnosis induced a high degree of therapeutic nihilism, they performed a great service to therapeutics in ridding it of overmedication, in giving it a clearer idea of the changes produced by disease and, finally, in giving it a scientific basis on which to build and imparting scientific methods.

Any sketch of the therapeutics of the nineteenth century would lose one of its brightest chapters were not the triumphs of bacteriology mentioned. Its greatest gift, that of diphtheria antitoxin, by which the death rate due to that disease was lowered from 50 per cent. to less than 10 per cent., bids fair to be equaled, if not surpassed, by the new cerebrospinal fever serum, by which, according to the best reports, the mortality in that disease has been lowered from 85 per cent. to 25 per cent.

But during this time of therapeutic purification, what had become of the materia medica? The progress here was no less marked than in therapeutics. One of the most important advances was the isolation of the active principles from the crude drug—the first being that of morphin, which was isolated by Sertürner of Hanover in 1816. The separation of other active principles soon followed, the great advantage they possessed being that of accuracy of dosage and rapidity of action when administered by the hypodermic syringe, which latter method, however, was first recommended by A. Wood, of Edinburgh, in 1855.

Iodin, potassium iodid and the bromids were introduced in the first half of the century, but more important than all is the introduction of the anesthetics—ether, by Jackson and Morton in 1846, and chloroform, by Sir James Simpson in 1847. These anesthetics, together with the method of antisepsis by the use of carbolic acid, which was introduced by Lister in 1867, have completely revolutionized surgery and made possible the great advances which that branch of medicine has undergone.

Yet, even with the addition of the iodids and bromids, Sir Lauder Burton has pointed out that as late as 1866 the practice of medicine was sadly hampered by the lack of reliable drugs. He says:

> We had no antiseptics; medicines for the relief of pain and sleeplessness were very few, opium (combined with tartar emetic if the fever was high), and I can remember how we watched to see if the new remedy, potassium bromid, would have the desired effect; and we had no antipyretics.

What a change in the last forty years! Where have all these new remedies come from and to whom are we indebted for them? In almost every case they have come from the laboratory, and the manner in which they have been introduced illustrates better than anything else the advance of modern medicine.

As Cushny has pointed out, with one exception every important drug which has been introduced into practice in the last forty years has come from the laboratories where its action was discovered by direct experimental work.

We owe our first modern soporific, "chloral," to Liebreich, professor of pharmacology in Berlin, who, in the course of his experiments to determine whether a substance is broken up into its constituent parts before it is oxidized, injected trichloracetic acid and chloral into frogs and rabbits. He became interested in the sleep-producing action of chloral, and after further experimental study it was introduced into therapeutics and is to-day perhaps the most reliable hypnotic in use.

Baumann, professor of physiologic chemistry at Freiburg, and Kast, professor of special pathology and therapeutics at the University of Breslau, introduced sulphonal as a hypnotic, and later Kast made a comparative study of trional and tetronal.

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[1] Comus, i. 47.

In 1881 Cervello, professor of pharmacology at Palermo, recommended paraldehyd as a soporific.

We had no antipyretic drugs except quinin and alcohol until 1874, when salicylic acid was discovered to possess antipyretic properties. In 1884 Filehne, who was then professor of pharmacology at Erlangen, introduced antipyrin, the first of our modern antipyretics. Acetanilid and acetphenetidinum appeared later. Coming to the local anesthetics, Von Anrep, in 1879, working in the pharmacologic laboratory at Würzburg, discovered that if cocain was injected subcutaneously the skin in its neighborhood became insensible to a pin prick. He recommended that it should be tried as a local anesthetic, but it was five years later that Koller, the ophthalmologist, made use of the discovery. Since then eucain and several other bodies have been introduced as substitutes for cocain. Lauder Brunton, after demonstrating the high blood pressure which occurs during the attacks on angina pectoris, introduced in 1867 as a remedy amyl nitrite, whose property of lowering pressure had been proved by the physiologist, Gamgee.

Brief mention is all that can be made of the two diuretics caffein and theobromin, which were introduced by Von Schroeder, professor of pharmacology in Heidelberg; also of hexamethylenamin (urotropin), physostigmin and pilocarpin, the latter being interesting as having been introduced in 1874 from Brazil, where it was used to increase perspiration; we owe it, therefore, to the clinicians. In 1894 Oliver and Shafer and Szymonowicz simultaneously discovered the action of extracts of the suprarenal gland, a discovery which has had a tremendous influence in stimulating research along these lines. Of special interest to us here in Michigan is acetozone, which is a product of the chemical and bacteriologic laboratories and also the drug now known as chloretone, which was first studied in the pharmacologic laboratory.

But the drug which illustrates perhaps better than any other modern pharmacologic methods is strophanthus. Dr. Kirk, who was with the Livingstones on their trip to the Zambesi, one day placed his tooth-brush in the same pocket in which he had some poisoned arrows. When using the tooth brush later he noticed a bitter taste, but imagined it was due to quinin which he had also had in his pocket. Very soon afterward the action of poison was shown by a marked lowering in the rate of the pulse. The arrows, which were brought back to England, were sent to T. R. Fraser, professor of materia medica in Edinburgh, who made an extended study of them, demonstrating that strophanthus contained a glucoside acting in the same manner on the heart as digitalis, and he introduced it into practice as a substitute for digitalis. It is very interesting to know that this poison had never been used in medicine before it was recommended by Fraser. The African natives themselves had no idea of its therapeutic value, and when efforts were made subsequently to get some of the drug the Africans thought the Europeans wanted it to poison their bullets.

Compare the manner of introduction of the drug just mentioned with that of some of the older therapeutic methods. Take, for example, the bromids, which were introduced about 1830. As they are closely related chemically to the iodids, it was supposed that they would be good in similar conditions and so they were used in syphilis, scrofula and goiter. They proved absolutely useless here, but during the time these trials were being made very large doses were given and it was noticed that they depressed the brain: it was not until about 1860 or 1865, however, that they began to be generally used either in epilepsy or as soporifics. Had they been subjected to careful examination in the laboratory, instead of mere speculative theory, before they were introduced into practice, the world would have had a good soporific drug thirty-five years earlier.

But what of the materia medica of the future? Along what lines may we expect development? It is possible that a closer scientific study of some of the older drugs which have been discarded may yield some material which will be valuable. As I have pointed out, however, synthetic chemistry has already contributed very largely and we may expect still more from the same source. We have learned from a study of allied chemical compounds the importance of the relation of chemical constitution to physiologic activity, and, further, that by altering the constitution slightly the physiologic action is also changed. By the application of this principle many important compounds have been discovered. I need only refer to one as an example: By the substitution of mandelic acid for tropic acid in the atropin molecule, we have homatropin, which possesses some great advantages over the parent substance.

A study of the fate of some of the chemical compounds in the body has yielded some brilliant results; for instance, anilin was converted into paramidophenol in the body, and this suggested that the latter might be the fever-reducing agent rather than the parent substance. A confirmation of this theory led to the introduction of compounds built up from amidophenol, and we have as a result acetanilid and acetphenetidinum.

An examination into the action of a large series of chemical substances in their relation to some pathogenic organism offers another field. Here may be mentioned the study of the arsenic compounds against the trypanosomes and also Ehrlich's study of hundreds of the color compounds against the same organisms.

As some one has pointed out, there is no reason why we should not confidently expect that some time there will be found chemical substances having the same specific action against the etiologic factors in the acute fevers that quinin possesses against the malarial organism.

A most inviting field is opened up by Starling's "hormones," the chemical substances which are formed in the body and by which the activity of associated organs is regulated. Those best known are the suprarenal extract, which has such an important relation to the sympathetic nervous system; secretin, by which the pancreas is stimulated to activity and the thyroid secretion in its effects on metabolism. There seems little doubt but that there are many other hormones existing in the body by which its various activities are regulated, and it is not at all unlikely that a further study of these will, as Starling says, "enable us to interfere at any desired phase in these functions and so acquire an absolute control over the workings of the human body."

THE COMPLEX CHARACTER OF THE PRESENT THERAPEUTIC SITUATION

These results, however, are to be attained by the most careful and patient study along the lines of physiologic and pathologic chemistry and only in that way. To illustrate the way by which scientific therapeutics is not

1/1300 gr. of nuclein to the dose, or almost as much as a person would get from a piece of liver the size of a grain of wheat.

Numerous other illustrations might be given as demonstrating the great skill which has been employed in the manufacture of preparations such as, for instance, some of the palatable cod-liver oils into which, in their efforts to make the mixtures palatable, the manufacturers forgot to put the oil.

But I think it may be questioned whether the fact that these preparations are advertised is not largely responsible for their use. Lincoln's old adage, "You can fool part of the people all the time," is still true to-day. Glancing over the pages of our so-called reputable medical journals, we still find the names of many preparations that are far from ethical, to put it mildly. Why are these there? Simply because the physicians use them. The day the manufacturers of these nostrums find out that it does not pay to advertise to physicians, that day their advertisements will disappear from the advertising pages of our journals. The remedy lies within the profession.

While this state of affairs exists at home, how can the medical profession consistently engage in a crusade against the medical advertisements which disgrace our daily papers and forms one of the foulest blots on modern journalism? I sometimes wonder how long the American people are going to sit quietly by and allow this condition of the daily press to continue. If the suggestion is made to exhibit a nude statue or picture —perhaps a copy of some famous classic—a vigorous protest will go up from a large percentage of the population for fear of the effect the exhibition may have on the morals of the young; yet year after year they will suffer their homes to be polluted and will put into the hands of their children these papers containing advertisements referring to the vilest and most loathsome diseases that the human race suffers from. Verily, we strain at a gnat and swallow a camel. But this is only parenthetical and concerns physicians as citizens, while I wish especially to point out their relation to medical progress.

Another factor which I am going to mention briefly as offering an obstacle to the advance of therapeutics consists in the prescribing of the ready-made mixtures which so many of the manufacturing pharmacists put out. These are usually put up in tablet form for the doctor's convenience. I can point out better what I mean by giving a few illustrations copied from a 1908 catalogue of one of the "scientific" pharmaceutical houses:

Cough tablet.—Sanguinarin nitrate, morphin sulphate, atropin sulphate, antimony and potassium tartrate, tincture of aconite and pine tar.

Diarrhea tablet.—Opium, aromatic powder, camphor, bismuth subnitrate, sodium bicarbonate, powdered kino and mercury with chalk.

Neuralgic tablet.—Hyoscyamus, conium fruit, ignatia, opium, aconite, cannabis indica, stramonium seed and belladonna leaves.

These are but samples of the variety offered and put up in lots of 100, 500 or 1,000 and guaranteed to save all brain fag. If the tablet on hand does not fit the patient, that's the patient's fault and he must be made to fit the tablet. Truly the golden text of too many of the twentieth century physicians is: "Of making new remedies there is no end and much study is a weariness of the soul."

How can therapeutics progress in the face of such polypharmacy? The shotgun prescription from which the nineteenth century rid us has returned, having merely changed its coat to one of chocolate or gelatin. Can we wonder that the layman prefers to save his doctor's fee and go direct to the drug store and buy Brown & Co.'s headache tablets or Jones & Co.'s diarrhea mixture No. 23?

Along the same line it may be said that the physician has demanded the pharmaceutically impossible and the pharmacist has supplied it (?). I need only refer to the tablets of bismuth, chalk and carbolic acid which were examined at the laboratory of the American Medical Association a short time ago and found to contain only from 12 to 70 per cent. of the carbolic acid they were supposed to contain, simply because the substance had disappeared on account of being volatile. Anything like exact observations on the action of drugs is impossible under such conditions. But we are assured that therapeutics is an art and not a science. This may be true, but the art will not suffer by a careful admixture of science.

Also in their anxiety to instruct the physician and make things easier for him, the manufacturing houses have published books on materia medica in which we find the diseases all nicely arranged in alphabetical order, and under each disease a list of all the drugs that have been suggested for it. These books, from the very nature of things, can not be expected to represent the best views of the day, as their use would naturally tend to an exaggerated idea of the importance of drugs in present-day therapeutics. Moreover, since their publication is not entirely due to altruistic motives, any special formula possessed by the firm is likely to receive at least its due share of attention. Also the labels on their bottles of medicine are made the vehicle by which they promulgate information which is more or less accurate as to the action and uses of the contained drug. For instance, Sharp & Dohme of Baltimore tell us that their fluidextract of digitalis "lengthens the systole or period of rest of the heart." Seeing that digitalis does not lengthen the systole nor is the systole the period of rest, the value of such information may be questioned.

So, too, the Merrill Chemical Co., in their labels, say that among the indications for their digitalis are "distended jugular veins: continuous, difficult or labored breathing; and irritative fever," and we may suppose perhaps that difficult respiration, from whatever cause, is to be treated with digitalis, and also may be led to question what "irritative fever" is. I have never met anyone who knew nor do the leading text-books define it.

It would seem that the pharmacists, in giving such information, must be meeting a need for something or other that the physician feels he lacks, or he would not allow himself to be insulted by the presentation to him of such incorrect and false statements.

The bits of pseudoinformation that I have mentioned simply show how absolutely ridiculous it is for physicians to go to the pharmacist for his instruction instead of to the proper authority, namely, some good work on materia medica. As it is at present too many physicians ask for bread and are contented when they receive a stone.

Another foe to progress of somewhat similar characteristics is the book which is said to contain 2,000 prescriptions, more or less, which have been employed to be advanced, let me cite a case which came under my notice about a month ago.

A prominent physician, in meditating over the subject of Bright's disease, decided that animals which eat their placentas do not suffer from the disease—which, by the way, is an incorrect observation. He, therefore, evolved the theory that the reason the human race is afflicted with the disease is that it loses certain ferments which are contained in the placenta. The remedy was immediately clear, and now all his nephritic patients are being treated with extract of human placenta. Under its influence he expects to get the urine so dilute that it will be nothing but water containing a small amount of phosphate, and then the kidney, being freed from irritating substances, can recover. I might add that patients are not told the nature of the remedy which is administered to them, so that any psychical effect it might have is excluded.

What advance is illustrated by such therapeutics over the time when sweat, bats, spiders and the moss from executed criminals' heads were employed as remedial agents! The case illustrates exactly the point at hand by showing the entire absence of those scientific studies which, as I have just pointed out, are absolutely essential to therapeutic progress.

In regard to therapeutics, a number of factors tend to make the situation very complex. In the first place, several schools have split off from regular medicine, taking with them some little atom of truth which they have so magnified that it shuts out from their view the great ocean of truth which stretches before them.

So we see the Christian Scientists, so called, emphasizing the influence of the mind over the body (a fact which every physician takes into consideration) and not only denying the power of medicine but even the reality of disease itself.

So, too, the osteopath bows down to the god of manipulation, although every physician utilizes massage in his practice whenever it is necessary.

It can not be denied, however, that such movements as these may exert a beneficial effect on medicine by calling attention to certain therapeutic measures which might otherwise be neglected.

More recently we have seen the development of the psychotherapeutic movement. Here, as Harrington has pointed out, we are supposed to be dealing with conditions in the patient due to influences acting primarily through the senses or secondarily through the imagination. But this is a physiologic process and religion is not concerned in it at all, as physicians from the earliest time have "been fully ordained to stimulate the highest and best energy inherent in their patients." The movement, both on account of its name, "the Emmanuel movement," and also because it is supposed to be endorsed by medicine and by theology, is doubly dangerous, and unless controlled with the greatest care will bring discredit on both medicine and the church.

Into the medical fold itself have crept evils which must be rooted out if the science of therapeutics is to progress. I refer here especially to the prescribing of proprietary preparations the composition of which is unknown; but so much has been written on the subject that I shall merely touch on it. It can not possibly be overlooked, as there are many here who in less than a year will go out to engage in the practice of medicine. No physician has a right to prescribe for his patient a medicine with the composition of which he is not familiar, and yet that is being done to-day in every city and town from Maine to California. A year or so ago in some of the eastern cities over 40 per cent. of the prescriptions called for proprietary medicines. Since that time a marked improvement has taken place; in one instance recently a decrease of from 10 to 60 per cent. was shown.

All sorts of reasons have been assigned to explain why these preparations are prescribed. One we hear most commonly is that the students are not taught to write prescriptions in the medical schools. There may be some truth in the charge, but I believe that there are other reasons which are more important.

One of these is that in so many of the large city dispensaries and hospitals into which the medical graduates go for practical experience, they are never required to write out a prescription. The hospitals keep a large number of stock solutions on hand, the compositions of these mixtures with their designating numbers being frequently framed and hung on the wall of the clinic room. All the interne has to do if he wants to give his patient nux vomica and gentian is to order "Mixture 13," or if he wishes to give potassium iodid he orders "Solution 1." By such a pernicious method, devised merely to save work, a large amount of most valuable experience is lost just when it is most needed. Another important factor is pure mental laziness on the part of the physician. Which is the easier for the doctor in a case, we will say, of muscular pain of obscure origin, to think up the name of some remedy about which he studied some time ago and to write a prescription for it, or to prescribe some nostrum with a fancy name, the samples of which the detail man left him only yesterday, positively assuring him it was good for rheumatism, lumbago, gout and all other diseases flesh is heir to?

Too many physicians do not take the trouble to use the knowledge they gained in college. They took long expensive courses in medicine and spent many, no doubt happy, hours in studying the action and uses of drugs; but just as soon as they get an opportunity to make use of their knowledge they call in somebody else to help them, who, as likely as not, never saw the inside of a medical book. Such physicians would be insulted if a layman should offer to aid them in making a diagnosis, but they gladly allow him to prescribe for the case.

But we are assured that these nostrums are the product of hard study and research; that they contain drugs unknown to the ordinary physician or compounded in such a way as to enhance some mystic virtues which they possess. It is certainly true that they would have to possess supernatural powers if they did all that was claimed for them. For instance, our friend Dr. Munyon's "kidney cure" was examined by the British Medical Association and found to contain a drug which probably has never been used in nephritis by regular physicians. It consisted of 100 per cent. cane sugar. His blood purifier pills, guaranteed to expel all impurities from the blood, were likewise found to consist of 100 per cent. cane sugar. But it may be said that such remedies are used only by the layman and not by the doctor. Well, are such cases as those just mentioned much worse than the tasteless quinin which physicians used with such success and which was found to be nothing but powdered gypsum?

A preparation of nuclein examined a short time ago was advertised by the maker to contain the very "essence of life." It was endorsed by physicians, one of whom in his enthusiasm wrote: "It makes the machine go." On examination the solution was found to contain by the most famous therapeutists. As a matter of fact, these books retard scientific prescribing by keeping alive a lot of shotgun prescriptions which the therapeutic leaders of to-day would never think of employing. The science of therapeutics would take a long step forward if all such props should be cast into the eternal fires of oblivion.

But the outlook is not entirely dark. The very fact that we notice such methods shows that we know better. Manufacturing houses are finding out that the medical profession is beginning to do its own thinking on therapeutic problems, that absurd claims which manufacturers were once able to make for their preparations are no longer accepted, and that the old time-worn proverb, "Honesty is the best policy," is a maxim not altogether out of date.

On the part of the physicians it may be said that there is a large and ever-increasing number who, knowing the action of drugs, prescribe them scientifically, that is, simply and with a definite object in view and in sufficient doses to produce the physiologic effects characteristic of each.

It would be of the greatest aid to therapeutics if more physicians would not only keep careful clinical records of the effects of the drugs but would also publish from time to time critical comments on them. By work of this sort the practitioner would contribute greatly to our knowledge of drug action, and it is only by such mutual cooperation of the man at the bedside with the man in the laboratory that therapeutics will make the progress that it should.

THE ESSENTIAL CHARACTERISTICS OF THE TRUE PHYSICIAN

And now, to you who to-day come for the first time seeking to be followers of Æsculapius and true disciples of the healing art, in the name and on behalf of the faculty it is my privilege to bid you welcome. You have chosen a noble profession and one which before all others will give you an opportunity to serve your fellow men.

Medicine never offered a more inviting field for work than it does to-day: and, on the other hand, the demand for the highest type of manhood was never greater. For other types medicine has no place.

If you would know the kind of men that medicine demands, then listen to this quotation from the Vedas, which describes what the ancient Hindu required of the prospective student of medicine: "He should be of a mild disposition—noble by nature—not mean in acts—possessed of intelligence — free from pride — endowed with a large understanding — with a power of memory and judgment -- having a liberal mind -- devoted to truth—disposed to solitude, free from haughtiness—of a thoughtful disposition—not prone to wrath—endowed with purity of behavior and compassion for all — devotedly attached to the study of medicine — free from cupidity—without sloth—seeking the good of all creatures."

Such is, indeed, a high standard, but surely medicine of 1908 can not accept lower ideals than did the Hindu thousands of years ago. No standard can be too high, for, as Cicero said: "There is nothing in which men so approach the gods as in giving health to other men."

Health and Education.—C. G. Kerley states that as a general proposition there should be no choice between health and education: only that education is effective which is founded on and which secures good health.—*Archives of Pediatrics.*

Original Articles

COMBATING TROPICAL DISEASES IN THE PHILIPPINES BY SCIENTIFIC METHODS

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TROPICAL DYSENTERY

At the time of the American occupation of the Philippine Islands tropical dysentery was the most serious and common disease which attacked both Americans and Europeans in Manila and the vicinity. Hence it was this affection which first attracted the attention of the medical scientists who came here at this period to study the prevailing diseases of the country. Some idea of the importance of this malady may be derived from a consideration of the fact that during the year 1900 in the United States Army here there occurred four times as many deaths from dysentery as from any other single disease. Little knowledge of the cause and nature, and even of the intelligent treatment, of this affection could be obtained from the physicians resident at that time in the Philippines, since no accurate study had previously been made of it in these islands. It was, therefore, important that such an investigation as would result in the satisfactory control and prevention of the disease should be undertaken as speedily as possible.

An extensive research on this subject, carried on in the laboratories which had been established in Manila by the American government, finally revealed the fact that the so-called tropical dysentery of the Philippine Islands really included three distinct diseases and that the most satisfactory forms of treatment were widely different for these various affections; thus one form (amebic dysentery) in Manila was found to be due to a species of protozoa, an ameba; a second, with an acute onset (bacillary dysentery), to a species of bacteria known as *Bacillus dysenteriæ;* and a third (catarrhal dysentery), a less common and a less serious form of dysentery, to the action of one of several bacteria which produced a catarrhal condition of the large intestine. The first type was found to be identical with the form usually known in certain portions of Africa under the term of "tropical dysentery," while the second was apparently the same as the prevailing form of intestinal flux occurring in Japan, and the third corresponded to the forms of catarrhal dysentery encountered more or less throughout the world.

It was, moreover, demonstrated that these three forms of dysentery could easily be distinguished from one another by laboratory methods. Thus the amebic form could always be recognized by a microscopic examination of the dejecta and by the presence of the specific parasite, the ameba, therein; while in the bacillary form the amebas were absent from the excreta; and the blood serum of the patient, when added to the *Bacillus dysenteriæ* (the germ giving rise to this form of the disease), caused a clumping of the bacteria into groups and their ultimate destruction, a reaction not given by the blood serum of patients suffering with other forms of dysentery or with other diseases.

After these discoveries in the differentiation of the varieties of the disease its treatment was soon placed on an intelligent basis, and it was found that while the most effective treatment for the amebic form consisted in attacking the parasite by local applications (enemas) the same therapy in the bacillary dysentery was not only not efficacious but very harmful, and that the best results in this variety of the disease were obtained by a general method of treatment and by the inoculation of antidysenteric serum. In the catarrhal type it was found that neither the local treatment nor the serum inoculations were to be recommended and that the disease generally yielded to much simpler therapy. It was further demonstrated that the amebic and bacillary dysenteries were usually acquired by drinking infected water and that the catarrhal form was, at least frequently, contracted in this way. Moreover, it was shown that the city water supply itself was practically always infected with amebas, and although it has not been definitely established that these same organisms are always capable of producing dysentery in man, nevertheless such water must be regarded as at least dangerous. So far it has been found quite impossible to destroy the amebas in the water supply by the introduction into the city reservoirs of chemical substances, such as copper sulphate, in safe amounts for drinking purposes, or to remove them by large filters, and for this reason, as well as for many others, the city water can not now, and probably never can be, recommended for drinking purposes unless it has been previously sterilized.

As a result of these discoveries both the mortality and the amount of dysentery among Americans and Europeans has become rapidly reduced during the past few years. The people have become educated to the necessity of avoiding the use of infected drinking water and of employing only boiled and distilled or imported aerated waters for drinking purposes. To-day bacillary dysentery, which formerly was epidemic here, and which frequently carried off its victims in from three to four days, is very rare in this city, and amebic dysentery is becoming less and less frequent each year among the more intelligent population. Physicians here have been taught to recognize these diseases in their very early stages, at a time when the symptoms may sometimes appear trivial, and then to institute the proper treatment. Therefore, the disease does not so often become chronic, and for this reason the amount of invaliding to the United States for dysentery has become much reduced. A decided advance in our knowledge of the amebas has been brought about by the demonstration in Manila of the ease with which they can be cultivated on solid media, and of the fact that they can be grown in the test-tube under certain conditions with almost the same facility as bacteria.

PLAGUE

In 1900 bubonic plague appeared in the city of Manila, the first case having been introduced from Hongkong. For a time it was feared that the disease might gain a firm foothold as it had, for example, in India, and, therefore, strenuous methods were adopted for its control. Practically all vessels arriving from infected ports were fumigated at once and other means taken to prevent the escape of rats from them to the land. The most rigid isolation of the patients sick with the disease was carried out. Since rats were known to suffer from infection with the plague bacillus and to scatter this organism about by means of their excreta, and, in fact, to be the most important disseminators of the disease both in this manner and by means of fleas which they carry about on their bodies, the wholesale extermination of these rodents was undertaken. Squads of rat-catchers, armed with rat traps, rat poison and every necessary implement, were assigned to the various districts of the city under the supervision of district sanitary inspectors. A bounty of 2½ cents gold was paid for each and every rat turned over to the health authorities and stations were established at convenient points throughout the city where they could be received. Each rat was tagged with the street and number of the building and lot from which it came and then dropped into a strong antiseptic solution and sent to the government laboratory, where it was subjected to a careful bacteriologic examination for plague. The premises where plague occurred, or where the rats infected with plague had been found, were subjected to a thorough disinfection and their owners compelled, under the direction of a sanitary engineer, to make necessary alterations. Cement ground floors were laid, double walls and ceilings affording refuge for rats were removed, defective plumbing was remedied, whitewash was liberally used for the destruction of fleas, and in general everything was done that could render the buildings where plague had occurred safe for human occupancy. Wherever these changes were not practicable, houses, or even districts, were frequently destroyed by fire.

The Board of Health in Manila considered, however, that by far the most effective measure in combating the epidemic of plague consisted in the immunization of the people living in the badly infected districts by means of inoculation with the prophylactic against the plague. All Chinese arriving from infected ports in China, and all those individuals living in a house where a case of plague occurred, were also inoculated with the prophylactic or with antiplague serum. To quote from the report of the director of health at this time in regard to the preventive inoculation against plague carried on in Manila: "The method has given results almost beyond expectation."

Partly for this reason and partly from the character of the disease, it seemed hopeful that a considerably greater success might be obtained against this malady by improved methods of protective inoculation; therefore particular attention was paid to the investigation of this subject in the government laboratories in Manila and a method of vaccination has been finally obtained which will probably reduce the mortality of plague among the vaccinated to under 20 per cent. usually, whereas it is well known that the usual mortality of plague is in the neighborhood of 80 per cent.

At present there is no plague in the Philippine Islands nor has a case occurred in them for over a year. It is hoped, however, that the method of vaccination against this disease will be employed in India, where the plague has raged for the past ten years in spite of all hygienic measures employed there and during which time the mortality has amounted to over 5,000,000.

CHOLERA

The first appearance of cholera in the Philippine Islands under American occupation occurred in March, 1902, and measures were at once undertaken to prevent the occurrence of an epidemic. Unfortunately, it was impossible to convince the majority of native physicians and the population in general that cholera had really invaded the islands and that a severe epidemic was imminent, notwithstanding the fact that the first cases found in the city had in the laboratory been carefully identified bacteriologically as those of cholera. For weeks, however, the presence of cholera was denied, the Filipinos refusing to believe in its existence because the daily deaths did not reach up into the thousands as they had done in the epidemic of this disease which occurred here prior to American occupation. Therefore, as was to be expected, the rigorous measures enforced by the board of health produced bitter opposition. The minds of the common people were poisoned by tales of abuses and even of murder in the cholera hospitals. The rumor was also circulated that the cholera was due to the Americans having poisoned the wells and that the quarantine measures instituted were evidences of revenge on their part. These absurd tales gained credence and proved a very serious factor in the control of the situation, since they led to the concealment of the sick, the escape of those who had been in close contact with cholera patients, and the throwing of the dead cholera bodies into the esteros (canals) throughout the city and into the Pasig River (the waters of the latter were frequently used for drinking purposes by the natives). In fact, for the first few weeks of the epidemic there was a general disposition on the part of the population to conceal every case of cholera which occurred. As a result, in spite of all measures of control, the disease spread throughout the city. The following measures for its suppression were, however, carried on and served to keep the epidemic under control:

A cholera hospital was established and, with a few exceptions, all definite and suspected cases were speedily removed to it for treatment. All cases of the disease were isolated. The city was divided into districts and each district was inspected during night and day for the purpose of detecting and diagnosing cases of the disease. All wells throughout the city were closed and distilled water was distributed for drinking purposes. A rigorous quarantine was placed around the city, and the Mariquina River, from which the city water supply was obtained, was carefully guarded by a patrol of regular troops in order to prevent it becoming infected. Certain districts, which were thoroughly infected with the germ of cholera and which could not be disinfected properly owing to the character of the dwellings, were destroyed by fire; notable among these was the so-called Farola District. The natives were reimbursed by the government for the loss of their houses and their property.

In order to aid the board of health in most of this work, measures for the early bacteriologic examination and diagnosis of the disease by means of cultures and immune sera were undertaken. An assistant was on duty day and night at the laboratory for the purpose of performing such diagnoses. The city water supply was examined from time to time throughout the epidemic for the cholera germ. This water was never found infected with this organism. Had it been so, the cases of cholera in Manila would have reached into the thousands daily. During the epidemic the highest death rate reached in Manila was ninety-one per diem.

Since it became evident early in the epidemic from bacteriologic examination that the city water supply was not infected with cholera, investigations were undertaken in the laboratory to find out by what means the disease was being spread. Visits were made from house to house in the badly infected cholera districts and cultures were taken from various foods, fruits, linen and articles of clothing and from various samples of water found in these houses. These studies were continued throughout the year and as a result of them it was determined that one of the chief means of the dissemination of the disease in Manila was through infected uncooked foods. As a result of these studies a number of uncooked foods and fruits were forbidden for sale in the markets. Flies were also shown to have played a part in the infection of certain foods where unsterilized excreta of cholera patients were exposed in the neighborhood. Certain wells and canals in the city were found to be infected with the cholera germ, and these also played a part in the spread of the disease; but, as mentioned, the general city water supply has never yet been found to be infected with the cholera organism.

Since it was recognized that individuals who had recovered from cholera might carry about with them the germ of the disease in their intestines for several weeks after convalescence and thus serve as disseminators of the infection, an attempt was made to keep each patient at the cholera hospital until his excreta were shown to be bacteriologically free from the cholera germ. It was later found, however, that some individuals who had only very mild symptoms of cholera, and who had not been taken to the hospital, also had cholera spirilla in their dejecta and thus they were able to act in spreading the infection.

Partially on this account, since such individuals must frequently escape quarantine, and partially as a general measure in the prevention of the disease, the subject of immunization in human beings against cholera was studied in the Manila government laboratories, and after extensive investigations a method of protective inoculation against cholera was devised which is perfectly harmless and which is not objected to by the natives. This method has been given an extensive trial in some of the smaller towns of the Philippines where cholera has been epidemic, and in Manila, and in all of these places large numbers of men, women and children volunteered for inoculation.

Although cholera has on several occasions since 1902 been banished from Manila and, indeed, supposedly from the entire Philippine Islands, it has always reappeared therein and has probably become, for the present at least, endemic in the islands. While the present hygienic measures are enforced, however, there is little danger of a large epidemic. It seems not unlikely that by means of protective inoculation we have a valuable adjunct in ridding a community of this disease, and it may be that we shall here finally come to resort to this method more generally for the extermination of the malady. In certain provinces of the islands statistics already show that the number of cases of cholera which have developed in the inoculated is only one-sixth of that which has occurred among the uninoculated.

MALARIA

In regard to malaria, it has been shown that nearly 50 per cent. of the native children in certain portions of the islands suffer from a latent form of this disease; that is, while many of them may not appear very ill to the casual observer, they are carrying about with them malarial parasites in their blood and furnish a constant source for the transmission of the disease to other individuals through the medium of certain species of the anopheles mosquito. Presenting few or only very indefinite symptoms, these children frequently remain untreated for the malarial infection. It is a well-recognized fact that the greatest source of danger to the white man in a malarial locality lies in these latent infections in the native, and particularly in the native children. Studies in the Philippines have demonstrated the importance of discovering these cases by means of a routine microscopic examination of the blood, and of the treatment of the patient and destruction of the parasites by means of quinin. Such measures play an important rôle in the suppression of malaria in certain portions of the islands.

The amount of anemia and general debility produced by malaria in the native population of the Philippines has been greatly underestimated. In some districts over 50 per cent. of the adults show either active or latent infection. Malaria is uncommon among white people in the islands, however, particularly in the large cities.

DENGUE FEVER

Studies in dengue fever have been recently made here which seem to show that this disease is perhaps conveyed by means of the bite of the mosquito *Culex fatigans*, which also transmits the parasite (a blood filaria) which gives rise to the affection known as elephantiasis. These investigations have also shown that the organism causing dengue fever is probably too small to be observed by the microscope (that is, it is ultramicroscopic), and that it is present in the circulating blood of the patient suffering with the disease.

INFECTION WITH INTESTINAL WORMS

An investigation has recently been undertaken in regard to the prevalence of animal parasites in the native population and their possible influence on the public health. In this study the dejecta of 4,106 prisoners were investigated, in all 15,000 microscopic examinations being made. It was found that 84 per cent. of these prisoners were infected with one or more animal parasites.

The most usual infection was with the common whipworm (trichuris), which was present in 59 per cent. Fifty-two per cent. were infected with hookworms (uncinaria), though very rarely were these infections severe ones. Indeed, in the Philippines this parasite does not play the important rôle that it does in Porto Rico, Egypt and several other countries in the production of a grave anemia. The great majority of those infected here show only mild infections, practically having no symptoms of disease and no visible anemia. The dejecta of 23 per cent. of the prisoners contained amebas and those of 26 per cent. round worms (ascarides). The numerous other parasites encountered were found only in a comparatively small percentage of those examined.

The question has arisen as to what rôle these infections play in regard to public health. Attention has been called to the fact that if these percentages of infection obtained from the examination of the 4,106 prisoners were applied to the total native population of the islands is would appear that no less than five million of the inhabitants of the Philippine Islands were infected with intestinal worms.

It has been argued that since the systematic treatment of the prisoners for intestinal worms was begun and vigorously carried out the death rate of the prison where these examinations were performed fell from 75 per 1,000 to 13 per 1,000 per annum. It appears, however, that this decrease in the death rate was very largely due to the gradual improvement in the general sanitary conditions in the prison, which lead to a very great reduction in the number of cases of beriberi present, many of which had been formerly unrecognized, and to the fact that the new prisoners arriving at the prison were at once surrounded by better hygienic conditions than the older prisoners had formerly been. While there is practically no evidence to show that the moderate infections with whipworms and round worms exercise a deleterious effect on the health of the individual, the infections with hookworms and with amebas must be regarded in a different light. Both of these parasites are pathogenic or may come to have decided pathologic importance in the individual infected. There can be but little doubt that the patients in a number of the cases in which there were amebas in the dejecta would sooner or later develop amebic dysentery, and it is very probable that a certain percentage of these would succumb to the infection if not treated. In this way, by the detection of these cases of amebic dysentery, and by instituting proper treatment, the mortality among the number infected would be reduced. As has been pointed out, the cases of hookworm infection were so mild that the hookworms themselves probably had but little influence on the death rate. However, in the more severe infections, both with hookworms and amebas, these parasites undoubtedly weakened the individual and rendered him more susceptible to the attack of other infectious diseases.

Since the source of all these intestinal worms is the dejecta of some individual infected, the most important factor in the extermination of this infection lies in the proper disposition of human excreta. The most satisfactory means for such disposal are now being investigated.

To obtain a working system, practical, economical and adapted to the conditions throughout the islands, is a special problem which will require considerable further study. When such a system is perfected, however, it will remove one of the most dangerous channels, not only for the dissemination of animal parasites, but for the spread of other intestinal infectious diseases of bacterial origin.

SMALLPOX

In relation to smallpox, attention must be called to the fact that since the beginning of systematic vaccinations in the islands over 3,515,000 people have been vaccinated against this disease with virus prepared in the government laboratory at Manila. A cessation of deaths from smallpox has followed in the provinces in which the people have been thoroughly vaccinated. In provinces where there were formerly 6,000 cases of the disease annually not one death has been reported from this disease for the past year. No case of loss of life on account of vaccination has occurred, nor have any limbs been sacrificed, nor has there been a case of very severe infection resulting from vaccination reported. The disease has been thoroughly kept under control by vaccination alone.

GENERAL HEALTH OF MANILA

After nearly ten years' residence in the Philippines I think that I am justified in saying that Manila to-day can certainly be regarded as a very healthy city for those who exercise proper hygienic precautions in regard to their mode of living. The death rate here for the past year among American residents has been only 5.59 and among Spaniards but 15.84 per 1,000.

MEDICAL LIBRARIES *

"CRITO, I OWE A COCK TO ÆSCULAPIUS; WILL YOU REMEMBER TO PAY THE DEBT?"—*Socrates*

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One of the serious problems which confronts the management of every library is the proper and equable apportioning of the book fund to the several departments. The problem is, of necessity, a flexible one and varies with the environment, the resources and the policy of the individual library. To-day I propose to discuss only one phase of the question, and that a narrow one.

Is it expedient to establish a medical department in a free library? By this I mean not the sporadic buying of a book on hygiene or domestic medicine, but the regular and methodical acquiring of standard works as liberally as the budget and the demand will justify.

In the larger cities or in medical centers, where doctors are many and medical societies are numerically and financially strong, experience has fully demonstrated that the needs of the profession will be better met by separate libraries. The correctness of this contention is fully shown in the experiences of Cleveland and Cincinnati, the only cities in the state which belong to this class. Both have splendid independent medical libraries, managed exclusively by medical men, and in both the departmental plan was tried and abandoned.

In the smaller cities and the larger towns where the library book fund is correspondingly small; it would be ill-advised to attempt the building up of a formal department; here the end would be better reached by purchasing medical books, like other specialties, on the request of those wishing to use them.

This narrows the inquiry to libraries of medium size, or, speaking generally, those located in cities from 35,000 to 125,000 inhabitants, which presumably have a fairly liberal income.

I know full well that there is a diversity of opinion among intelligent librarians as to the propriety of the public library providing books for special or professional readers. From our viewpoint the negative sentiment smacks too strongly of a cloistered past. Is there a librarian here to-day who does not take pride, and justly, in what his institution is doing for the special student, the technical worker and the craftsman of every kind?

There is a general agreement among progressive librarians that the modern library should not only meet, as far as possible, every reasonable demand for wholesale reading, but that it should be boldly aggressive and meet the needs of all sorts and conditions of readers.

If I correctly interpret the contention of those who would build a Chinese wall of small dimensions around the library, it practically amounts to a discrimination against the three older professions—law, medicine and theology. But the conditions are so different that these professions can not be justly measured by the same standard.

As to the clergy, we will probably all agree that there is little call for a special department. A successful ministry must seldom, if ever, depend on the access to doctrinal works, which, as a rule, find their way to the shelves in rich abundance.

To compare the doctor with the lawyer is manifestly unfair. In altruistic concept and practice the two professions are as wide apart as the poles. I hold no brief for medicine, but its marvelous achievements within the past few decades alone are without a parallel in history, and in proof I need only to cite the Promethean gifts of anesthesia, sanitation and asepsis, a trinity which has let such a flood of sunshine into the life of the world. In no other branch of human endeavor do men give so freely of their time and labor for the good of their fellowmen, and there is no other profession whose constant effort in disease prevention tends inevitably to its own destruction.

The public so confidently associates charitable deeds with the calling of the doctor that it little notes the fact that he may be carrying more than a fair share of the burden which rests on society. Without special thought one can not appreciate the money value of the work done gratuitously and continuously by the rank and file of the profession.

The money value, very conservatively estimated, of the services rendered annually to the hospitals of my home city by their respective staffs is not less than $65,000. This estimate, made by a better statistician than I am, does not include the extramural charity work of these men or of their colleagues. Nor does the experience which such service gives constitute a just recompense, for those who render the service received their appointments on account of their recognized ability and skill. It is high-class medical labor rendered by high-class medical men, and as such should have recognition. If the opportunity to acquire experience is so valuable, how does it happen that the court never orders the veriest novice in the law to defend the pauper criminal without adequate compensation in the coin of the country?

A recent discussion before a prominent library association is my justification, if any be needed, for writing this screed. The consensus of opinion was strongly adverse to the development of the medical department in the public library and the full range of objections was skillfully run. It was held that medical books were high-priced, short-lived in usefulness, unfit for general circulation, technical in character, and required special knowledge on the part of the librarian. Various speakers reiterated, with the monotony of parrots and the zeal of covenanters, the slogan, "Let the doctors do as the lawyers do, and furnish their own libraries."

Let us briefly consider this indictment against the medical department, taking the last and most specious count first. Confining the inquiry to our own state, there are in Ohio about sixty special law libraries organized under the legislative act of 1872. This statute, which has been favorably amended at various times, authorizes the commissioners of any county to contract with a library association to furnish book facilities for the judges and county officials. Under this law the commissioners of my own county, out of the general tax levy, have not only furnished and equipped elegant and commodious rooms in which to house the books, but provide heat, light and the salary of the librarian, amounting to over $2,500 per annum. The library association in addition receives certain fees accruing from state cases in the police court. The membership fees go to the book fund.

Let us look at the other side of the shield. There is not a public library in the state which has a live, growing medical department, unless by a stretch of the imagination the effort in Dayton can be so designated; nor is there in the state an independent medical library supported wholly or in part out of the general tax fund. One medical to sixty law libraries is the record. Gladly would the doctors fare like the lawyers. We have no quarrel with our friends the lawyers, nor would we lessen the number of their libraries, but we would build at least an equal number for the doctors. This is not asked as a charity; it is demanded as a right.

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*Read before the Ohio Library Association, November, 1908.

A further study of the condition in Ohio shows that a few libraries, rather than anger the friends of the dead, keep under key and cobwebs—mostly cobwebs—some long-neglected bequests. Some house the books of the local medical society, and others, constituting the majority, collect only the medical flotsam and jetsam which drift to their doors, and except in the rarest instances, these are not catalogued or properly shelved. Perhaps they are not worthy of better treatment, for a miscellaneous collection of old medical books is about the deadest thing known. Total annihilation is the proper remedy.

This is a sufficient answer to the taunt so often flung in the face of the profession, that doctors do not use the medical books now in the public libraries. Can they feed on husks? Would you employ a doctor who did use such books? Physicians do use the up-to-date independent medical libraries, and the accusation that they do not use the public library collections will cease to be true if the latter are kept fresh and serviceable.

There is no limit to the money that could be usefully expended in the founding and maintaining a medical department, but it is the minimum amount, not the maximum, that concerns us now.

Roughly estimated, the initial expenditure ought not to be less than $500 to $800 and largely invested in foundation books, like encyclopedias, atlases, the larger works of reference, transactions of the leading special and national associations and bound serials which, though costly, do not need early replacement. When the collection is once installed a yearly outlay of from $200 to $400 will provide a goodly number of the really valuable new books and several of the best foreign and domestic periodicals. Private contributions may be confidently relied on. Every physician subscribes for one or more medical journals and would rather place them where they would be cared for and be accessible for reference than to store them at home—possibly in the garret.

Since the formal opening of the medical department in the Dayton library, two years ago, there have been received from donations considerably over eight hundred volumes, most of which are obsolete and worthless, some are last editions, and not a few are rare and valuable classics. The permanent accessions have been carefully culled, for in no other department of literature should gifts be so closely scrutinized. It is the glory of modern medicine that a text-book ten years old has only the historical value of the fossil. This rapid superannuation of medical books is accepted as an excuse by certain librarians for refusing to buy them, but to my mind it has just the opposite meaning. If no further discoveries or progress were possible in the science of medicine there would be little need of books or libraries. A small collection would serve, by inheritance, many generations of doctors.

It goes without saying that there are medical books whose use by the patrons of the library should be restricted, but the number is not so large as one might assume without investigation. The same rules that safeguard the proscribed books in general literature, no small number in some libraries, will amply suffice. Young people and grown-up children prompted by curiosity or pruriency should be barred from the medical alcoves, but there is no valid reason why the collection should be closed to any adult of pure motives and ordinary intelligence. Never before were laymen so deeply interested in or so conversant with medical problems, especially of sanitation and disease prevention, and never before did medical literature so strongly challenge the attention of the world's ablest thinkers.

It was a layman's reading of Osler's "Practice of Medicine" which led to the founding of the Rockefeller Institute for Medical Research, one of the great institutions of the country, which has already rendered signal service to mankind in the discovery of a curative serum for one of the most dreaded of brain diseases.

Medicine is as old as the human race, its appeal is universal and to the best instincts of humanity, and the time has come when its teachings ought not to be a sealed book to the intelligent citizen of any community.

Unquestionably the best use of medical books requires the services of a specialist; and this arrangement will rarely be practicable in libraries of the size under consideration. The ideal way of offsetting the librarian's lack of technical knowledge would be to have a progressive doctor on the board of trustees to whom matters connected with the medical department could be referred. Another method of meeting the difficulty, and one which commands favorable consideration, is to elicit the cooperation of the medical society which now exists in every county in the state. An auxiliary committee thus secured can give valuable aid, apart from technical assistance to the librarian, in securing donations, in stimulating the zeal of the profession and by acting in a general advisory capacity.

The cooperative plan has worked well in Dayton. The medical society donates annually $100 to the book fund. It appoints a committee to act with a representative of the library board, to which the general supervision of the medical department is given, subject to the approval of the trustees, which is the court of last appeal.

The output of medical literature is so immense that no library can obtain more than a fragment of the whole. But, by cooperation with neighboring libraries, and especially with the Surgeon-General's Library at Washington, the greatest collection of medical books in the world, a library may, without cost, save for transportation, greatly extend its resources and give fairly good service to its patrons.

To conclude, if I am right in my contention, the public, like Socrates, owes a cock to Æsculapius, and above other institutions the free, tax-supported library should be the Crito to see that the debt is settled: first, because the library pays in coin which will be most acceptable and most profitable to the doctor, for as Osler puts it, "to study the phenomena of disease without books is to sail an uncharted sea"; second, because in this way the public gets a speedy return on its investment, for the physician who accepts the payment will be the more competent to discharge the burden which society has placed on him.

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IMMUNITY AGAINST TUBERCULOSIS IN GENERAL PARESIS

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In our knowledge of immunity against infectious diseases no fact is more firmly established than that different individuals of the same species are apt to show different degrees of susceptibility to a given specific infection. In the case of tuberculosis this fact is commonly recognized even by the laity.

The valuable results which have been obtained through experimental studies of immunity have stimulated interest in work in that direction; at the same time investigation of the nature of immunity of spontaneous occurrence has been somewhat neglected. And yet it may be that such investigation might throw light on some problems which experimental studies have failed to elucidate.

In other words, it seems to me that a great deal might be gained if we should be enabled, by a study of cases, to arrive at a complete answer to the question: What circumstances have produced immunity against a given infection in certain individuals?

A number of curious observations pertaining to this subject have already been made. The degree of skin pigmentation seems to be to a large extent an index of the degree of immunity against yellow fever. Prolonged residence in a malarial district apparently confers comparative immunity against malarial infection. Immunity as well as susceptibility to tuberculosis seems to be transmissible by heredity. Chronic alcoholism predisposes to pneumonia. The Japanese possess a high degree of immunity against scarlet fever.

The spontaneous occurrence of immunity against tuberculosis has been but little investigated. The object of this paper is to record the observation that a high degree of immunity against tuberculosis exists in cases of general paresis, although in this disease, owing to the well-known trophic and nutritive disturbances, susceptibility to other infections is distinctly increased.

Some years ago I noticed that although the rate of mortality from tuberculosis at this hospital was high, as shown by findings at autopsies, yet general paresis patients that came to autopsy were remarkably free from tuberculous lesions.

This observation was almost constant, and I was finally led to go over carefully all the autopsy records at our pathologic laboratory with a view to determining whether or not this observation was correct.

For that purpose I tabulated the records in such a manner as to show the frequency of active, quiescent and healed tuberculous lesions in cases of general paresis and in cases of all other psychoses. In this way I found striking corroboration of the observation which I had made.

As the total number of cases at this hospital was small, however, I availed myself, in addition, of the autopsy records from the state hospitals at Ward's Island, New York; at Flatbush, Brooklyn; at Middletown, N. Y., and at Buffalo, N. Y.[1] Thus I had the opportunity of examining the records of 1,056 cases, of which 214 were cases of general paresis. Table 1 shows the resulting statistical findings.

These figures show that tuberculosis is very prevalent among inmates of insane asylums, active lesions having been found in 23.2 per cent. of the cases of all psychoses other than general paresis; yet of the cases of general paresis only 2.3 per cent. showed the presence of active tuberculous lesions.

TABLE 1.—TUBERCULOUS LESIONS FOUND IN CASES OF GENERAL PARESIS AND IN CASES OF OTHER PSYCHOSES

Psychoses.	Number of Cases	Active Tuberculosis.		Quiescent Tuberculosis.		Healed Tuberculosis.		Tuberculosis Absent.	
		No.	Per Cent.	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.
General paresis.............	214	6	2.3	8	3.7	33	15.4	167	78.6
Other psychoses............	842	195	23.2	21	2.5	153	18.1	473	56.2

TABLE 2.—TUBERCULOUS LESIONS FOUND IN CASES OF GENERAL PARESIS AND IN CASES OF OTHER PSYCHOSES AT DIVERS AGES

Age in Years.	Psychoses.	Number of Cases.	Active Tuberculosis.		Quiescent Tuberculosis.		Healed Tuberculosis.		Tuberculosis Absent.	
			No.	Per Cent.	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.
1—29	General paresis	10	0	0	0	0	1	10.0	9	90.0
	Other psychoses	67	31	46.3	0	0	6	8.9	30	44.8
30—39	General paresis	73	2	2.7	0	0	7	9.6	64	87.7
	Other psychoses	112	44	39.3	3	2.	10	8.9	55	49.1
40—49	General paresis	70	3	4.3	3	4.3	10	14.3	54	77.1
	Other psychoses	122	37	30.3	3	2.5	15	12.3	67	54.9
50—59	General paresis	35	1	2.9	3	8.6	6	17.1	25	71.4
	Other psychoses	139	23	17.1	5	3.6	21	15.1	90	64.2
60 +	General paresis	9	0	0	0	0	6	66.7	3	33.3
	Other psychoses	363	44	12.1	9	2.5	99	27.3	211	58.1
Ages unascertained	General paresis	17	0	0	2	11.8	3	17.6	12	70.6
	Other psychoses	39	16	41.0	1	2.6	2	5.1	20	51.3

These statistics, however, would hardly be acceptable as proof of the existence in cases of paresis of immunity against tuberculous infection, for the reason that paresis occurs chiefly between the ages of 35 and 55 years, that is to say, practically past the age of greatest susceptibility to tuberculosis. Therefore in Table 2 I have retabulated my data in such a manner as to show the frequency of tuberculosis in cases of paresis as well as in cases of other psychoses at different ages.

The figures in this table require no comment or interpretation, as their significance is self-evident.

In this study I have made no use of the many thousands of clinical records of this and other state hospitals, fearing that such records might render my statistics unreliable. Non-tuberculous pulmonary complications are extremely common in general paresis, and clinically these complications can not always be distinguished from pulmonary tuberculosis. On the other hand, tuberculosis among the insane is often overlooked

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[1] I wish to acknowledge my indebtedness to Drs. Joseph B. Betts of Buffalo, Roy E. Mitchell of Middletown, Glanville Y. Rusk of Ward's Island, and Joseph Smith of Brooklyn, for kindly allowing me to make use of their autopsy records.

owing to absence of subjective complaints, to lack of cooperation on the part of patients in physical examinations, and to the difficulty of obtaining from such patients specimens of sputum for examination.

It seems to me, however, that the number of pathologic records on which the above statistics are based is sufficiently large, and that in view of the remarkable showing of the figures the existence of a distinctly heightened immunity against tuberculosis in cases of general paresis is hardly to be questioned.

To what is this immunity due?

It has been shown by experimental inoculations that paretics are immune against syphilitic infection.[2] This immunity is attributed to previous syphilitic infection, which is now generally regarded as the one essential factor in the etiology of general paresis. The question that naturally suggests itself is: May not the immunity against tuberculosis be due to the same cause? Syphilitic *infection, as is well known, gives rise in the human* organism to an inflammatory reaction which is almost identical in its nature with that which results from tuberculous infection. This fact, it seems to me, adds probability to the above assumption.

In this connection also other questions of practical interest suggest themselves: If syphilis does confer immunity against tuberculosis, at what clinical stage of syphilis does this immunity develop? How would the course of a case of tuberculosis be affected by a superadded syphilitic infection.

I found among all the pathologic records which I examined five cases of insanity due to syphilitic brain disease. All of the patients were entirely free from tuberculous lesions. I found also records of eight cases of cerebral hemorrhage with histories of syphilis; in two of these a few small scars were found at the apices of both lungs—probably healed tuberculous lesions; the rest showed no evidences of tuberculosis. The number of these cases is too small, of course, to justify any conclusion, and further investigation, both clinical and anatomic, would be required to answer the above questions.

HISTORY OF IRIDOTOMY

KNIFE-NEEDLE VS. SCISSORS—DESCRIPTION OF AUTHOR'S V-SHAPED METHOD *

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To Cheselden has been conceded the honor of being the father and originator of iridotomy. Nearly two centuries have elapsed since he first published the report of his procedure in the Philosophical Transactions for 1728. Ever since that time, his signal success has been acknowledged by all except those who either failed to equal his dexterity, or who were prejudiced by their ambition to originate a new method.

A careful review of the medical literature of the century and a half following Cheselden's announcement can not fail to impress the reader with the great interest attached to operations for the formation of an artificial pupil, which subject was considered second only in importance to that of cataract itself. Not only were a large number of monographs devoted wholly to this subject, but every work on general surgical topics set aside one or more chapters for the discussion of artificial pupil. This is in great contrast to the limited space which modern works on ophthalmology grudgingly yield to this still important subject.

It is difficult for us to appreciate the conditions which brought about so large a percentage of cases of pupillary occlusion. Crude surgical procedures, poor operative technic and the utter lack of asepsis often resulted in iridocyclitis or iridochorioiditis. The couching of the lens, the free discission of both hard and soft cataracts, the frequent introduction of the knife-needle through the dangerous ciliary zone, and the bungling efforts at extraction all increased the tendency to inflammatory reaction, while inadequate therapeutics and lack of antiphlogistic measures frequently permitted the deposit of plastic exudate in the pupillary area, thus resulting in membranous occlusion of the pupil.

OPERATIONS FOR ARTIFICIAL PUPIL

For the sake of historical completeness, and in order to better emphasize the special domain of iridotomy, I will mention briefly the various methods that have been employed in making an artificial pupil. These are:

(1) *Division* of the thickened iris-membrane by an incision made either through the sclerotica or through the cornea. This is true *iridotomy*.

(2) *Excision* of a portion of the iris through a previously made corneal opening. This is now known as *iridectomy*.

(3) *Separation* of the iris from its ciliary attachment. This was generally known as *iridodialysis*, but sometimes called *iridorrhexis*.

(4) Simple *incision* of the pupillary margin, and of the free iris tissue. This has been designated *sphincterotomy* by some, and *corectomy* or *iritomy* by others. Either one of the latter terms is to be preferred, because it is more clearly descriptive.

(5) *Detachment* of the synechiæ at the pupillary margin, either anterior or posterior, thus allowing the pupil to retract. This was known as *corelysis*.

(6) *Strangulation* of the prolapsed iris in the corneal incision was called *iridencleisis*. The prolapse was sometimes tied with a ligature.

(7) *Trephining* of the iris-membrane, by passing a small trephine or punch through a corneal incision.

(8) *Section* and removal of a portion of the sclerotica and chorioid by knife or trephine, with replacement of the conjunctiva over this opening, the conjunctiva thus acting as a substitute for the cornea in transmitting light. This was called *sclerectomy*.

(9) *Transplantation* of the cornea for total leucoma. This was usually preceded by partial or complete trephining of this membrane.

In addition to these nine distinct methods certain combinations of these have been described and successfully practiced:

(10) *Division* and *excision* have frequently been performed together.

(11) *Separation* and *excision* have likewise had some vogue.

(12) *Separation* and *strangulation* have occasionally been practiced.

(13) *Detachment* of the synechiæ and *excision* have also been performed.

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[2] Krafft-Ebing: Die Aetiologie der progressiven Paralyse, *Arbeiten*, 1897, ii, 12.

* Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

may, in almost all cases be effected, of a requisite size to establish a permanent artificial pupil" (Figs. 10 and 11).

Here were three elements of success, a sharp knife, a gentle sawing movement, and the most delicate pressure of the instrument. His method was a decided advance, and he reported success in nearly one hundred cases. Others, less skilful, however, failed of success, and the severe criticisms of Scarpa,[15] though evidently unjust and tinged by personal animosity,[16] cast a shadow of doubt on the method.

From that time on for nearly half a century this form of iridotomy was practically abandoned, the pendulum swinging toward the use of scissors, which Maunoir had popularized and Scarpa had indorsed. Walton,[17] however, about 1852, proposed a method closely resembling that of Heuermann and almost identical with that of Beer (vide Fig. 6). His iris-knife (Fig. 12) was practically the same as the broad iris-knife of Beer. He incised the cornea near the limbus, and passed the knife across the anterior chamber to the middle of the iris-membrane which he punctured with a sweeping vertical incision (Fig. 13). If the tissue still retained its elasticity there appeared a long pupillary aperture, elliptical and vertical (Figs. 14 and 15). This incision, however, like all those made through a single set of the iris fibers, was only successful when there was sufficient resiliency remaining in the iris tissue to draw the slit open, and thus keep the edges from uniting. While this method never became very popular, there were some who later practiced it by substituting a very narrow Graefe knife for the iris-knife of Heuermann, Beer and Walton. In fact, this latter procedure still has considerable vogue, both for iridotomy and capsulotomy.

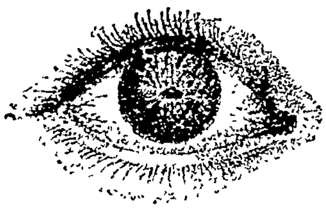

Fig. 10.—Occlusion of pupil (Adams).

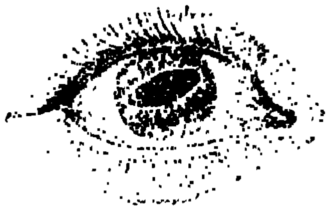

Fig. 11.—The resulting pupil after iridotomy (Adams).

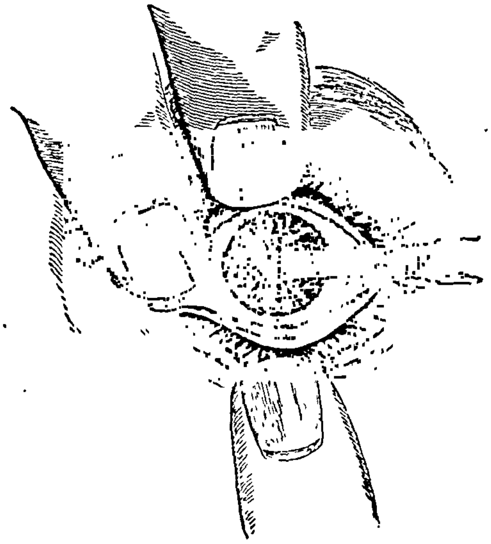

Fig. 13.—Iris-knife in position to make central pupil (Walton, after Beer).

During the following seventeen years no notable advance was made, the scissors method still retaining its hold on the profession, until in 1869, von Graefe, after long reflection, became convinced of the dangers of that method, and communicated to one of his pupils, M. Meyer, his method of simple iridotomy performed with the knife-needle. Meyer[18] quotes his views as follows:

> "For such cases von Graefe has suggested another method of operation, the *principle and execution of which are contained in* the following note written for us by that illustrious savant in 1869:
>
> "When, in consequence of a cataract operation, the lens is absent, and when there is highly developed retro-iritic exudation, with disorganization of the iris tissue, flattening of the cornea and the other sequelæ of a destructive iridocyclitis, I substitute *simple iridotomy for iridectomy, which is the operation* hitherto performed, generally without success. The operation consists in inserting a double-edged knife, resembling in shape a very sharp pointed lance-knife, through the cornea and newly formed tissues till it pierces the vitreous body, and immediately withdrawing it; and, while withdrawing it, enlarging the wound in the membranes without increasing the size of the corneal wound. *Experience shows that such plastic* membranes attached to the atrophied iris and to the capsule of the lens have a tendency to contract sufficient to maintain, to a certain extent, the opening which has been made.
>
> "If, in the ordinary method of iridectomy, combined with laceration or extraction of the false membranes, we find that the artificial pupil usually becomes closed, we must attribute this to an excessive vulnerability, which immediately sets up proliferation in those tissues which have been touched, and which are endowed, in consequence of their structure, with an irritability altogether peculiar. We know that even the transitory reduction of the intraocular pressure, which follows the evacuation of the aqueous humor, is sufficient to give rise to hemorrhage in the anterior chamber, which interferes with the *perfect success of the intended operation;* but most of our failures in the ordinary methods are due to the irritation caused by the forceps and the traction on the surrounding structures. Simple iridotomy is free from such inconveniences; it is, so to speak, a sub-corneal act, and enjoys the immunity which belongs to subcutaneous operations.
>
> "I have also reduced the corneal wound to a minimum, by using small falciform knives. These are passed through the false membranes, which are then cut from behind forward."

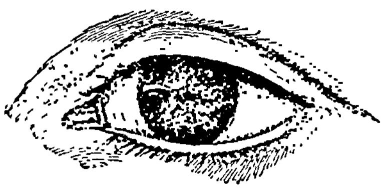

Fig. 14.—Occlusion of pupil (Walton).

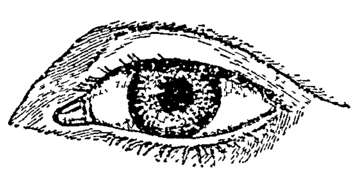

Fig. 15.—New pupil after incision with iris-knife (Walton).

Von Graefe thus proposed two methods, (1) by cutting from before backward with a double-edged lance-knife, according to the method of Heuermann, and (2) by cutting from behind forward with a sickle-shaped knife, after the original suggestion of Cheselden. Later in the same year, as he lay on his last bed of illness, he became so absorbed in the study of this subject that he sent a telegram to the Heidelberg Congress[19] (September, 1869), in which he advocated the method by the sickle-shaped knife-needle as the best procedure. His last message to his colleagues showed, therefore, that through mature conviction he strongly favored the use of the knife-needle, and the making of a sub-corneal incision in the iris-membrane without evacuating the aqueous humor. His untimely death, however, prevented him from further perfecting this procedure and presenting it to the profession.

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[15] Scarpa, Antonio: Trattato Della Principali Malattie Degli Occhi, Ed. quinta, Pavia, 1816, translated by James Briggs, London, 1818, p. 373.

[16] Edin. Med. and Surg. Jour., No. 58.

[17] Walton, H. Haynes: The Surgical Diseases of the Eye, London, 1861, p. 604.

[18] Meyer, Edouard: Traité Pratique des Maladies des Yeux, Paris, 1880, translated by Freeland Fergus, Philadelphia, 1887, p. 396.

[19] Klinische Monatsblätter für Augenheilkunde, 1869, p. 431.

Galezowski,[20] in 1875, published a somewhat similar method in which he used his falciform knife, *aiguille-a-serpette* (Fig. 16), which he introduced through the cornea and iris-membrane, making either a horizontal or a vertical incision, with a "go-and-come" (sawing) movement, after the suggestion of Adams. If this single cut was not sufficient, he made a linear incision of the cornea with a Graefe knife, drew out the iris and cut it off with scissors. By a process of evolution, however, he perfected the former procedure and eliminated the scissors. This latter method was published in the third edition of his book in 1888. He punctured the cornea and iris-membrane with the sickle-shaped knife, making first a horizontal incision by the sawing movement of Adams, and finishing with a second cut in the vertical direction, thus forming a T-shaped incision. In actual practice, however, he frequently prolonged this second cut, thus making a crucial incision after the manner of Guérin.[11]

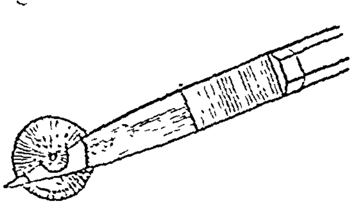

Fig. 17.—Wenzel's cataract knife and method of incision (after MacKenzie)

The writer,[21] in 1888, was led to devise an operation with a modified Hays knife-needle, in which through a corneal puncture he made a converging incision in the iris-membrane which resembled an inverted V. The resulting pupil opened up and formed either a triangular or an oval-shaped pupil depending on the degree of stiffness or resiliency of the iris-membrane. This method will be described in detail later on.

II. SCISSORS METHOD

We will now return to the consideration of the second school in which scissors were introduced through a previously made corneal section and a free incision was made in the iris-membrane, or a portion of the membrane excised

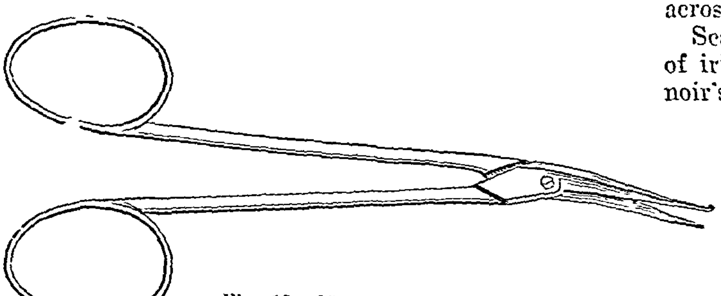

Fig. 18.—Maunoir's scissors.

Janin,[10] in 1768, having abandoned the procedure of Cheselden, proposed a new method. He incised the cornea below as for cataract extraction, and raised the corneal lip with a spatula while he introduced a pair of curved scissors, the lower blade of which was pointed. He plunged this sharp blade through the iris-membrane, and with a single vertical cut made a crescentic pupil which gaped sufficiently for visual purposes. As this is the first known description of iridotomy by the scissors method it is probable that Janin was the originator of this procedure.

Wenzel,[22] in 1786, employed a different method. With a lance-shaped cataract knife he entered the cornea, dipped through the iris-membrane, returned to the anterior chamber, and continuing to cut made a counterpuncture on the opposite side of the cornea, following which he completed his cataract incision. This gave a semilunar flap of iris tissue which could easily be excised by scissors passed through the large corneal opening (Fig. 17).

Maunoir,[23] in 1802, took up the method of Janin, with the object of improving it. He made an incision near the corneal margin, through which he introduced a pair of long, thin, angular scissors of his own design (Fig. 18), one blade of which was sharp-pointed like a lancet, and the other button-pointed like a probe. The iris-membrane was then punctured by the sharp blade at about the natural location of the pupil, and an incision executed toward the ciliary margin of the iris. Finding that this single incision did not always succeed,[24] he subsequently improved this method by making a second incision from the pupillary area toward the iris margin, in the line of the radiating iris fibers, thus making a divergent V (Fig. 19). This triangular flap was then allowed to shrink back, or if too stiff, was drawn out and excised. The resultant pupil assumed the shape either of a triangle, a parallelogram (Fig. 20), or a crescent (Fig. 21). He always made his incision parallel with the radiating fibers of the iris and across the circular fibers.

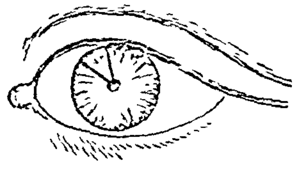

Fig. 19.—V-shaped iridotomy with scissors (Maunoir).

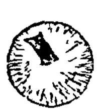

Fig. 20.—Parallelogram pupil (Maunoir).

Scarpa,[15] in 1818, having abandoned his own method of iridodialysis as wholly unsatisfactory, adopted Maunoir's procedure with enthusiasm, chiefly because he had by a friendly correspondence[24] personally encouraged Maunoir with advice and suggestion during its development. He indorsed Maunoir's plan of a double incision when he stated his conviction that "experience has proved that in order to obtain, with the most absolute certainty, a *permanent* artificial pupil, it is necessary to make *two* incisions in the iris so as to form a triangular flap in the membrane, in the form of a letter V, the apex being precisely in the center of the iris and the base near the great margin." Some have claimed that Scarpa himself originated the V-shaped incision, but

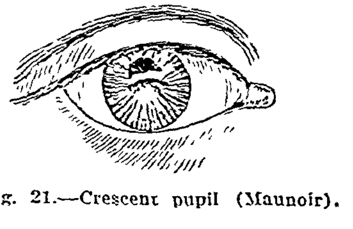

Fig. 21.—Crescent pupil (Maunoir).

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[20] Galezowski, Xavier: Maladies des Yeux, 2d. ed., Paris, 1875, p. 401, and 3rd. ed., Paris, 1888, p. 384.

[21] A brief description of the author's method, written by him, was first published in de Schweinitz on Diseases of the Eye, Philadelphia, 2nd. ed., 1896, p. 607.

[22] Wenzel, Baron de: Traité de la Cataracte, Paris, 1786, translated by James Ware, London, 1805, ii, p. 256.

[23] Maunoir, Jean Pierre: Mémoires sur l'Organisation de l'Iris, et l'Opération de la Pupille Artificielle, Paris, 1812.

[24] Medico-Chir. Trans., London, 1816, vii, p. 301, and ix, p. 382

he gives Maunoir full credit for its successful accomplishment, although he does suggest some additional indications for its practical application.

His opposition to the knife-needle incision of Cheselden arose from the fact that the pupil either did not open, or if it did open would not remain permanent, chiefly because of the single iris incision. His antagonism to the more successful procedure of Adams was the result of a caustic personal controversy[16] with that skilful surgeon, who ably parried his charges.[14] His great influence with the profession of that day, however, served to check the sentiment in favor of Adams' procedure, and when the weight of his indorsement was cast in favor of Maunoir's operation the scales were decisively turned toward the side of the scissors method.

Mackenzie,[25] in 1840, practiced Maunoir's operation with considerable success, but in certain cases found it necessary to employ a slight modification of this procedure. He reversed Maunoir's incision by making the same divergent V across the radiating fibers of the iris instead of parallel with them (Fig. 22), thus securing a triangular pupil (Fig. 23), which Lawrence[26] thought might succeed in some cases where Maunoir's method would not be available.

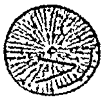
Fig. 22.—Mackenzie's incision in cornea and iris-membrane (Mackenzie).

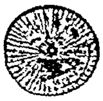
Fig. 23.—Resulting triangular pupil from Mackenzie's incision (Mackenzie).

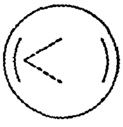
Fig 24.—Plan of Bowman's first iris incision. Divergent V.

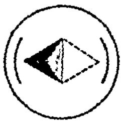
Fig. 25.—First incision completed. Plan of second, showing double V.

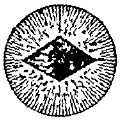
Fig. 26.—Rhomboidal pupil, resulting from Bowman's iridotomy.

Bowman,[27] in 1872, proposed a method which, though surgically difficult to execute, was quite ingenious, and may have been the initial suggestion that stimulated DeWecker to write his monograph in the following year. I will quote his description as follows: "We make a double opening simultaneously on opposite sides of the cornea. It is more convenient, of course, to make these two openings in a horizontal than in a vertical direction. I then run a pair of scissors in two diverging lines (V) from each incision, thus enclosing between the incisions a large square or rhomboidal portion of the iridial region including the pupil, and all the structures there. You then withdraw the portion thus cut out. There is no drag on the ciliary region; whatever is withdrawn has been cut away from its connections beforehand" (Figs. 24, 25 and 26).

This method is simply an elaboration of the one proposed by Maunoir, in which, instead of forming one divergent V, Bowman has made a duplicate incision on the opposite side, and by joining the bases of these two resultant triangles has caused them to take the shape of a rhomboid, thus <>.

DeWecker,[28] in 1873, published his admirable monograph on iridotomy, in which he proposed the operation which bears his name, and which has long stood as the best recognized method of this procedure. He advocated two different ways of performing this: 1, simple iridotomy, and 2, double iridotomy.

1. *Simple Iridotomy.*—This is practically the same operation as Critchett's sphincterotomy and Bowman's visual iridotomy, although differently executed. It has been supplanted in our day by iridectomy, and does not, therefore, come within the purview of this discussion.

2. *Double Iridotomy.*—He rightly claimed that this was both antiphlogistic and optical in its purpose. He employed two distinct methods, which he designated as (*a*) iritoectomic, and (*b*) iridodialysis. The instruments he used were a small stop-keratome (Fig. 27) and a pair of specially devised fine iris scissors (pinces-ciseaux) (Fig. 28), one blade being sharp pointed and the other blunt. These scissors were a great mechanical advance over all previous instruments of this kind, and undoubtedly proved to be a most important element in the success of his procedure.

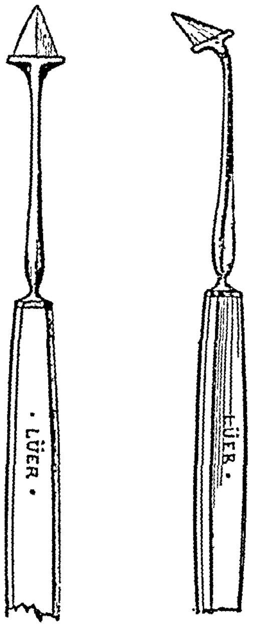

Fig. 27. — Stop keratomes, straight and angular (De Wecker).

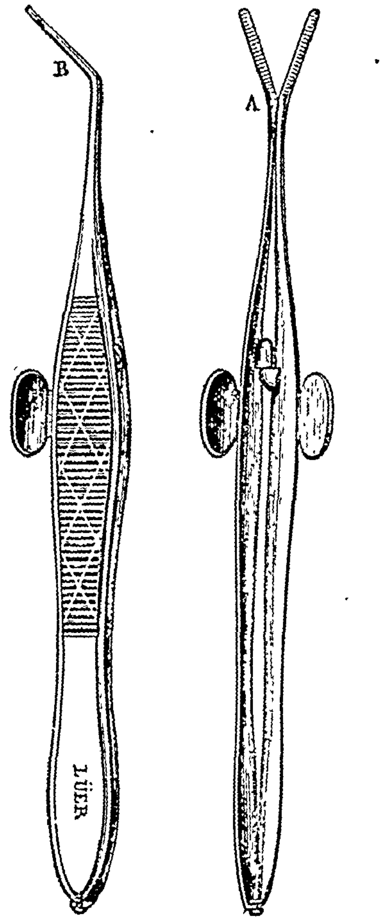

Fig. 28. — Forceps-scissors (pinces-ciseaux) (DeWecker).

(*a*) *Iritoectomic.*—He entered the stop-keratome through the cornea, made an exact 4 millimeter incision, and then partly withdrew it while letting the aqueous slowly escape. As soon as the iris-membrane floated up against the knife, he pressed forward, making a 2 millimeter incision in the iris. Slowly withdrawing the knife, he introduced the sharp point of the scissors through the iris buttonhole and cut obliquely from either extremity of the incision toward the apex of a triangle, thus making a convergent V (Fig. 29). He then grasped the resulting triangular flap with the forceps and removed it, leaving an open central pupil.

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[25] Mackenzie, William: Diseases of the Eye. 3rd. ed., London, 1840, p. 746. American edition, edited by Hewson, Philadelphia, 1855, p. 815.

[26] Lawrence, Sir William: Diseases of the Eye, American edition, edited by Hays, Philadelphia, 1854, p. 478.

[27] Transactions, Fourth Int. Ophth. Cong., London, 1872, p. 179.

[28] DeWecker, Louis: Annales d'Oculistique, Sept., 1873, p. 123, et seq.

(*b*) *Iridodialysis.*—His second method was a counterpart of Maunoir's earlier operation, with the addition of iridodialysis. He made the corneal and iris incision with the stop-knife, as in the previous method. Slipping in his scissors he cut from the center of the iris-membrane toward the periphery, and duplicated this incision at an oblique angle to the first, thus making a divergent V (Fig. 30). This formed a triangular flap which he grasped with forceps and tore from its ciliary attachment by iridodialysis.

DeWecker's procedure was planned by a skilled operator, and required great dexterity in its execution. When successful, however, the result was most brilliant. Nevertheless, it was impossible to eliminate the danger of hemorrhage and loss of fluid vitreous in iritoectomie, while in iridodialysis there was the added danger of a torn ciliary surface and traction on the ciliary body. His strict injunction to have a trained assistant hold up the speculum blades in order to avoid the loss of fluid vitreous, showed how much he feared this disastrous contretemps. The success of his method of incision is well shown in the illustration of his two cases (Figs. 31 and 32).

I have already suggested the possibility of Bowman's paper before the London Congress of 1872 having given origin to DeWecker's monograph in 1873. This seems quite reasonable when we consider that Bowman proposed two methods of iridotomy, one his double V operation with a rhomboidal pupil (previously quoted), and the other a visual iridotomy or sphincterotomy, by cutting through the pupillary margin with a blunt corneal knife. These two methods are exact prototypes of DeWecker's proposals. Furthermore, DeWecker was present at the London Congress where he heard Bowman's paper, and took part in its discussion. In fact, thirteen years later DeWecker acknowledged[29] that after considering the objections to Bowman's method of iridotomy "I addressed myself at that time to the search for an instrument which allows the avoidance of all traction on the iris, and which can be handled through a narrow opening, while exerting its cutting action in a plane parallel to the surface of the cornea, against which the diaphragm of the iris applies itself, after the escape of the aqueous humor. The forceps-scissors having been discovered, it was easy for me to cause to be revived the procedure of Janin, and to make it decisively take rank in modern ocular surgery."

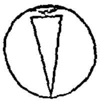
Fig 29.—Iritoectomie. Convergent V (DeWecker).

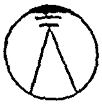
Fig 30.—Iridodialysis. Divergent V (DeWecker).

DeWecker makes only a casual reference to Maunoir's method, but credits Janin with the original suggestion of the method which he has thus elaborated. Nevertheless, it is quite evident that DeWecker's method was simply a modification of the one outlined by Maunoir seventy years before. Furthermore, he lays down the same rule that Maunoir first offered: "Always cut parallel to the radiating fibers and perpendicularly to the circular fibers of the iris."

RELATIVE ADVANTAGES OF KNIFE-NEEDLE VS. SCISSORS

In reviewing the questions at issue between these two schools of iridotomy, one can not help noticing the constant oscillation from one method to the other as certain advances were made. The method by the knife-needle seemed to possess the advantage of easy accomplishment and less postoperative disturbance, but with the disadvantage that often the pupillary opening was inadequate and promptly reclosed by plastic exudate. On the other hand, the method by the scissors was more difficult of accomplishment, caused more traumatism to the eye, was often complicated by great loss of fluid vitreous, and was frequently followed by severe inflammatory reaction. If, however, it proved successful, the resulting pupil was permanent and sufficiently large for visual purposes. The inclination of all operators seemed to be toward the use of the knife-needle, and it was only necessity that forced them to adopt the more complicated procedure of the open operation with scissors. Von Graefe seemed to recognize this when he referred to the knife-needle incision as "a sub-corneal act which enjoys the immunity of subcutaneous operations."

The chief advantages of iridotomy by the knife-needle are the ease of incision, the lack of traction on the ciliary body, the freedom from postoperative inflammatory reaction, the avoidance of opening an eyeball which may contain fluid vitreous, the lessening of the tendency to iris hemorrhage from lowered tension, and the avoidance of the nebulous scar which often follows a large corneal incision in old inflammatory eyes. The disadvantages revealed in the method of the knife-needle lay partly in the method and partly in the faulty instruments constructed in that day. Cheselden, Morand, Sharpe and Adams all made the mistake of entering the eye back of the corneoscleral junction, which is so near to the danger zone of the eye. Adams, however, made a two-fold improvement in adding to his operation a sawing movement and in advocating the "most delicate pressure of the instrument" in order to make a free incision. Heuermann was apparently the first to make the puncture through the cornea instead of through the sclera.

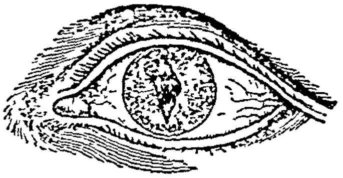
Fig. 31.—Pupil by iritoectomie. Two incisions. Convergent V (DeWecker).

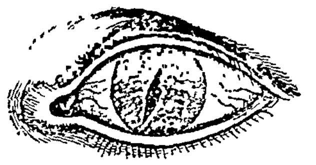
Fig. 32. — Stenopaic pupil. Single iris incision (DeWecker).

The advocates of the knife-needle method long labored under the disadvantage of making a single iris incision, while those who employed the scissors early discovered that a double incision was necessary to success. Although Janin was the originator of the scissors method, Maunoir was the first to deliberately try a triangular flap, which DeWecker later elaborated and made a permanent success. The many disastrous results of the open operation, however, compelled conservative surgeons, like von Graefe, to revert to a study of Cheselden's method, and to seriously consider the great advantages which a successful iridotomy by the knife-needle method would confer on surgeon and patient alike.

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[29] DeWecker et Landolt: Traité Complet d'Ophtalmologie, Paris, 1886, ii, p. 393.

THE CHOICE OF A KNIFE-NEEDLE

1. Cheselden's knife-needle (Figs. 3 and 4) was a splendidly designed instrument, but a poorly executed one. The blade was too large (11 mm.) and the shank improperly rounded, so that both aqueous and vitreous were liable to escape through the scleral puncture. This leakage may explain many failures, although the single iris incision was undoubtedly the most serious fault of the method.

2. The iris-scalpel of Adams (Fig. 7) was poorly designed but splendidly executed, the long blade completely filling the wound and thus preventing the escape of any fluid. The cutting edge, however, was too long (15 to 20 mm.), and especially so for the execution of the sawing movement advised by Adams.

3. The double-edged lance-knife (Figs. 5, 12 and 33) employed by Heuermann, Beer and von Graefe, was useful for the long sweeping incision in the iris-membrane which they advocated, but is not adapted for the method which will be described later. The same shaped knife (Fig. 33) with a smaller blade and a longer shank is also used for this purpose, but is likewise too broad, too oval pointed and too much bellied to cut well, while the upper edge is liable to scarify Descemet's membrane at the same time that the lower edge is executing the incision in the iris tissue.

4. The sickle-shaped knife (Fig. 16) which von Graefe recommends and Galezowski employs, is excellent for making the puncture, but for the go-and-come movement, which Galezowski advises, is not nearly so good as the straight blade with a slight falciform point. It closely resembles the older falciform knife of Scarpa.

5. The knife-needle of Knapp (Fig. 34), which is so generally used for capsulotomy, is unfortunately not well adapted for iridotomy. The point is too oval, the cutting edge is too much bellied, and the blade is too short (5 mm.). It will not easily puncture a dense iris-membrane, and the long sawing incision can not be well executed, because the short blade either persists in slipping out of the iris incision or else allows the membrane to ride up on the shank, in either case interfering with the completion of the operation.

6. Sichel's iridotome (Fig. 35) closely resembles Knapp's knife-needle, and although specially designed for this purpose, has the same faults, an oval point and a bellied edge. On the other hand, the blade is too long (11 mm.) to be easily manipulated in the anterior chamber.

7. The Hays knife-needle (Fig. 36), as suggested in the early part of this paper, has the same general shape as Cheselden's instrument, although much smaller. It was devised by Dr. Isaac Hays, an early surgeon of the Wills Hospital, and, although not well known to the profession at large, has been in constant use by the staff of that hospital for more than half a century. I may be pardoned for briefly quoting the original description of the instrument as published by Hays[30] in 1855:

> "This instrument from the point to the head, near the handle (a to b, Fig. 36), is six-tenths of an inch, its cutting edge (a to c) is nearly four-tenths of an inch. The back is straight to near the point, where it is truncated so as to make the point stronger, but at the same *time leaving it very acute*, and the edge of this truncated portion of the back is made to cut. The remainder of the back is simply rounded off. The cutting edge is perfectly straight and is made to cut up to the part where the instrument becomes round, c. This portion requires to be carefully constructed, so that as the instrument enters the eye it shall fill up the incision, and thus prevent the escape of the aqueous humor."

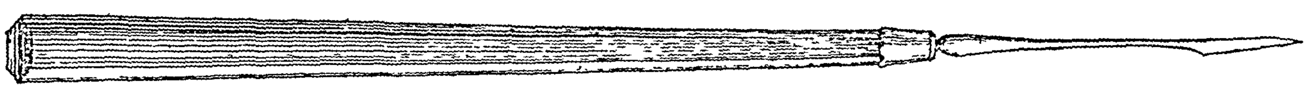

Fig. 4.—Cheselden's knife-needle (after Sharpe).

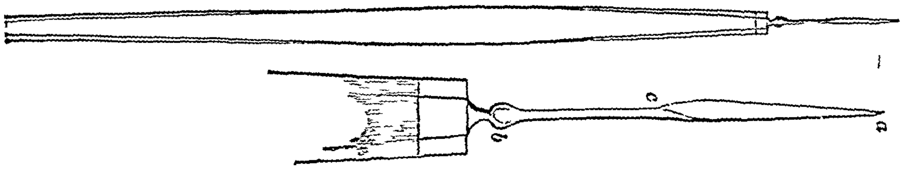

Fig. 36.—Hays' knife-needle, exact size and enlarged (Hays).

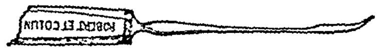

Fig. 16.—Sickle-shaped knife, Aiguille-à-serpette (Galezowski).

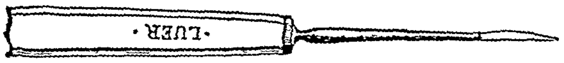

Fig. 35.—Sichel's iridotome (after Meyer).

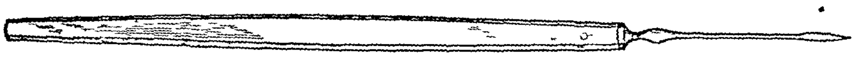

Fig. 34.—Knapp's knife-needle.

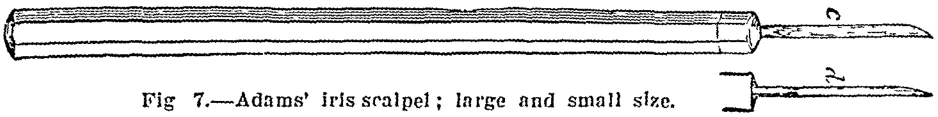

Fig. 7.—Adams' iris scalpel; large and small size.

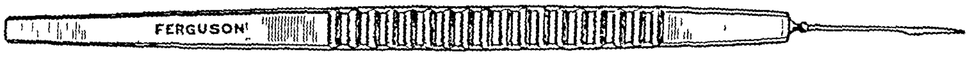

Fig. 37.—Ziegler's model of knife-needle.

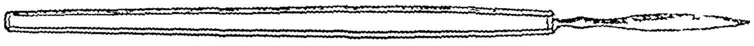

Fig. 33.—Double edged lance-knife (modern model).

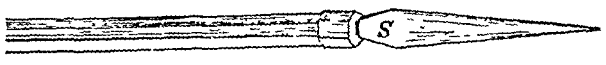

Fig. 5.—Double edged lance-knife (Beer).

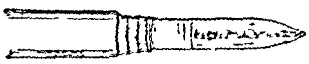

Fig. 12.—Iris-knife (Walton, after Beer).

The Various Knife-Needles and Iris-Knives Mentioned in the Text. (Grouped together for study and comparison.)

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[30] Amer. Jour. of the Med. Sciences, July, 1855, p. 82.

8. The knife-needle, which I invariably use, is a modified pattern of that devised by Hays. The form of this instrument lies midway between the falciform knife and the bistoury, and possesses the advantages of both. It has a very delicate point which punctures easily, and an excellent cutting edge of sufficient length (7 mm.). If the shank is properly rounded it can be used with a sawing motion, sliding backward and forward through the corneal puncture without injuring the cornea, and without allowing the aqueous to escape. To accomplish this the more easily, the shank has been made 4 mm. longer than the original model. This instrument, therefore, seems to meet all the requirements of a perfect iris-knife, viz., a falciform point which makes the best puncture, a straight edged blade which makes the best incision, and a cutting edge 7 mm. long, which is the best length for properly executing the sawing movement. My model[31] of knife-needle (Fig. 37) resembles Cheselden's knife, as shown by Sharpe (Fig. 4), even more closely than the original pattern of Hays does.

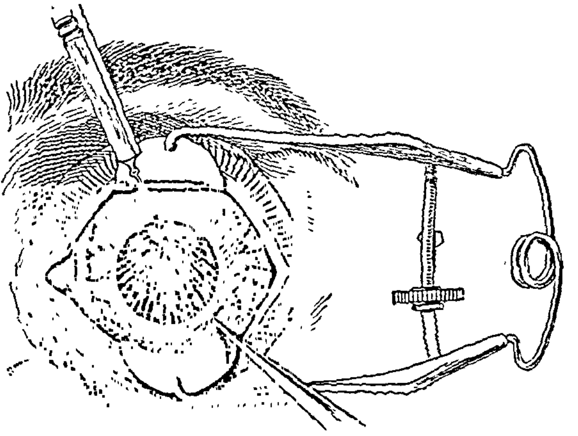

Fig. 38.—Author's V-shaped iridotomy. Knife-needle entered through cornea.

ESSENTIALS OF SUCCESS IN IRIDOTOMY BY THE KNIFE-NEEDLE METHOD

1. A good knife-needle must be carefully selected. We have already concluded that the modified Hays knife-needle is the best model for this purpose. The knife-needle must, of course, have a well sharpened point and edge.

2. The character of the incision in the iris-membrane is of vital importance. It should be a double incision. Guérin, Maunoir, DeWecker and Galezowski recognized this. Guérin made a crucial incision, Maunoir and DeWecker adopted the triangular flap, while Galezowski advocated the T-shaped cut. Our choice is the V-shaped incision, which is undoubtedly the only one that will cut through all the iritic fibers in such a way as to give us the *greatest* retraction of the membrane.

3. Absolutely no pressure should be made in cutting with the knife-needle. This must be recognized as the *main* secret of success, whether you are incising a dense, felt-like iris-membrane, or a thin filmy capsule. If this rule is observed all traction on the ciliary body will be avoided.

4. The knife-needle should slide backward and forward through the corneal puncture with a gentle sawing movement.

5. The corneal puncture and membrane counterpuncture should be far enough apart to make the corneal puncture a good fulcrum for the delicate leverage necessary in executing the iris incision.

6. The knife-needle should be so manipulated that no aqueous shall be lost, as this accident may prevent the completion of the operation, and may increase the tendency to iris hemorrhage by lowering the ocular tension.

7. Every incision should be made a thoroughly clean cut, and all tearing of the tissues should be avoided.

8. The most perfect artificial illumination should be secured, either by an electric photophore or a condensing lens, as both iridotomy and capsulotomy require constant and close inspection of the operative field.

AUTHOR'S V-SHAPED IRIDOTOMY

The method of V-shaped iridotomy, performed by me with my modified Hays knife-needle, may be described as follows:

First Stage.—With the blade turned on the flat, the knife-needle is entered at the corneo-scleral junction, or through the upper part of the cornea (Fig. 38), and passed completely across the anterior chamber to within 3 millimeters[32] of the apparent iris periphery. The knife is then turned edge downward, and carried 3 millimeters to the left of the vertical plane (Fig. 39).

Second Stage.—The point is now allowed to rest on the iris-membrane, and with a dart-like thrust the membrane is pierced. Then without making pressure on the tissue to be cut, the knife is drawn gently up and down with a saw-like motion, until the incision has been carried through the iris tissue from the point of the membrane puncture to just beneath the point of the corneal puncture. This movement is made wholly in a line with the axis of the knife, the shank passing to and fro through the corneal puncture, and the loss of any aqueous being carefully avoided in the manipulation.

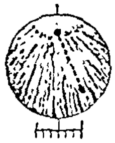

Fig. 39.—Author's V-shaped method. Plan of first incision.

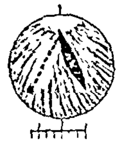

Fig. 40.—First incision completed. Plan of second incision.

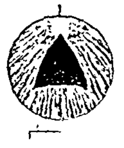

Fig. 41.—Pupil resulting from V-shaped iridotomy.

Third Stage.—The pressure of the vitreous will now cause the edges of the incision to immediately bulge open into a long oval (Fig. 40) through which the knife-blade is raised upward, until above the iris-membrane, and then swung across the anterior chamber to a corresponding point on the right of the vertical plane, which, owing to the disturbance in the relation of the parts made by the first cut, is now somewhat displaced and the second puncture must be made at least 1 millimeter farther over, i. e., 4 millimeters to the right of the vertical plane (Fig. 40).

Fourth Stage.—With the knife point again resting on the membrane, a second puncture is made by the same quick thrust, and the incision rapidly carried forward by the sawing movement to meet the extremity of the first incision, at the apex of the triangle, thus making a *converging* V-shaped cut (Fig. 41). Care must be taken at this point that the pressure of the knife-edge on the tissue shall be most gentle, and that the second incision shall terminate a trifle inside the extremity of the first, in order that the last fiber may be severed and thus allow the apex of the flap to fall down behind the lower part of the iris-membrane. If the flap does not roll back of its own accord it may be pushed downward with the point of the knife. When the operation is completed the knife is again turned on the flat and quickly withdrawn.

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[31] This knife-needle has been carefully made for me by Lüer, Paris, and by Ferguson, Philadelphia.

[32] Compare with millimeter scale beneath each diagram.

CAUSES OF FAILURE

The most fruitful sources of failure are, first, a poorly sharpened knife-needle; second, a badly planned incision; third, inability to sever the apex of the triangle; fourth, the early loss of aqueous; fifth, too heavy pressure with the knife-edge, and sixth, rocking or rotating the knife backward instead of making the sawing movement. All of these can easily be avoided, if the surgeon will only exercise care and good judgment.

In an occasional case, the iris-membrane may be so stiff that the apex of the flap will not retract. If the apex can not be pushed down by the tip of the knife turn the blade on the flat, puncture the base of the flap by a quick thrust, and with a sawing motion cut across its fibers so that it will fall back as though hinged; or, if positive that the vitreous is not fluid, introduce a keratome in the cornea below, draw out the triangular tongue, cut it off with the iris scissors, and dress back the base with a silver spatula.

It is possible that the capsule, or iris tissue, may lose its anchorage. In that event we must either reverse the procedure by entering the knife-needle below, and cut from above downward, or else pass a second knife-needle through the loosened edge of the membrane to fix it, and then proceed with the usual method.

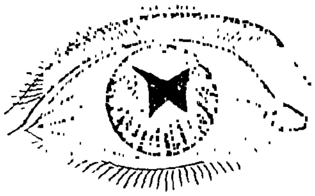

Fig.42 (Case 1).—Iridotomy in a stiff iris-membrane (author's original case).

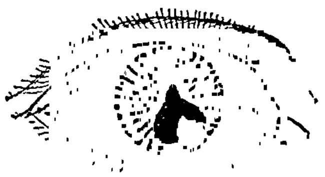

Fig. 43 (Case 2).—Iridotomy in a soft eye-ball, with dense iris-membrane.

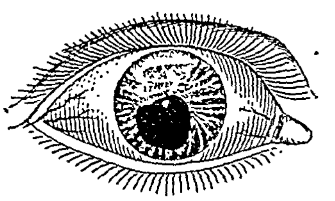

Fig. 44 (Case 3).—Iridotomy in a soft eyeball, with thin membrane and iris bombé.

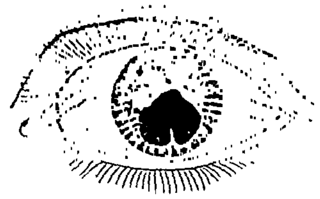

Fig. 45 (Case 3).—Iridotomy showing apex of iris flap after incision through adherent fibers.

Occasionally, the apex of the triangular flap will hold fast, because the last fiber of tissue has not been severed. If the leverage is too short to incise it from above, withdraw the knife-needle and reintroduce it far enough from the apex to secure the proper leverage, and again incise it gently, until it falls back.

Traction on the ciliary processes, accidental puncture of the ciliary body, or the tearing of the membrane from its ciliary attachment may all set up iridocyclitis or glaucoma, and should therefore be avoided. As tense capsular bands are liable to engender a similar condition they should be incised. If any of these traction bands should remain in the edge of the coloboma, we may enter the knife behind them and gently saw through into the already cleared pupil, before withdrawing the knife.

ILLUSTRATIVE CASES

I will briefly cite a few examples of the V-shaped operation, two that were my first efforts, and two that were recent cases. They were all of the class that are often abandoned as hopeless; hence the visual result is far below the operative success.

Case 1.—*History.*—F. M., aged 65 years. O. D. complete membranous occlusion of pupil from iridocyclitis, following cataract extraction. The iris and capsule are tensely drawn up toward the ciliary border. Light perception and projection good. Several efforts have been made to incise the membrane, but without success. Admitted to Wills Hospital by the late Dr. Goodman, through whose courtesy I operated.

Operation.—On Jan. 15, 1889, I made two long incisions, almost crucial, and extending beyond the apex of the V, resulting in a W-shaped pupil, on account of the stiff iris membrane (Fig. 42). With S. + 10 D. he saw 20/50.

Case 2.—*History.*—J. S., aged 30 years. O. S. injured and enucleated. O. D. sympathetic inflammation, chorioidal cataract; three discissions and one iridectomy, down and in. Membranous occlusion of pupil. I first saw him in 1888 while house surgeon at the Wills Hospital, where iridotomy was skilfully performed nine times by one of the surgeons, the methods being varied and ingenious, but without success, as the incision was invariably closed by plastic exudate. My interest in this series of operations first drew my attention to the subject of iridotomy, and stimulated me to develop the method I have here submitted and which I first tried in Case 1.

One year later this patient came to my clinic at St. Joseph's Hospital. Iris was discolored, capsule thickened and visible through the coloboma, down and in; areas of scleral thinning, with pigmented chorioid showing through. T—3. Light perception good, projection only fair.

Operation.—On June 17, 1889, I made a V-shaped iridotomy along the outlines of the former iridectomy. The membrane freely opened up into a triangular or pear-shaped pupil (Fig. 43), which proved permanent, but was only useful for quantitative vision, about 5/200. No further test could be made because the disorganized vitreous was filled with floating masses. I have seen him within a year, going about and earning his living. From an operative standpoint I have always considered this early effort one of my most successful cases, chiefly because of the great density of the iris-membrane and the lowered tension of the eyeball.

Case 3.—*History.*—Mrs. A. D., aged 45 years. O. D. iridectomy for glaucoma seven years ago. O. S. iridectomy two years ago by another surgeon, at which time there occurred slight incarceration of iris, followed by sympathetic ophthalmitis in O. D. The severe iridochorioiditis resulted in cataract and some shrinkage of globe. The cataracts were extracted from both eyes in 1907, followed by dense opacity of cornea above, iris bombé, shallow anterior chamber, T—2. Here was a soft, distensible, iris tissue with shallow anterior chamber and greatly lowered tension of the eyeball, constituting one of the most difficult conditions to operate on.

Operation.—On May 13, 1907, the eyes being quiet, and light perception and projection fair, V-shaped iridotomy was performed on both eyes. The leucomatous areas in the upper part of cornea necessitated making the pupil below. In O. D. the pupil opened up beautifully (Fig. 44), but in O. S. a tag of iris hung fast (Fig. 45) and was again incised two months later. The artist has illustrated the remaining portion of this tag very well. As soon as the iris tissue was incised it retracted, making the pupils larger than the area of incision. The test for glasses, nearly a year later, March 15, 1908, yielded the following result:

O. D. $S + 13\ D \substack{\frown \\ \smile} C + 4.75\ D$ ax. 105° $= 20/40$.
O. D. $S + 13\ D \substack{\frown \\ \smile} C + 3\ D$ ax 65° $= 20/40$.
Add
O. D. $S + 4\ D = J.\ 10$.
O. S. $S + 4\ D = J.\ 10$.

These were ordered in biconvex torics. She had worn glasses for a year, but claims vision is much better with the new *ones.* This seems like an excellent result when we consider that these eyes had passed through glaucoma, iridochorioiditis and cataract, followed by membranous occlusion of pupil, lowered tension and fluid vitreous. The high hyperopia and astigmatism show the phthisical condition of each globe. There is marked cupping of both nerve heads and the fields are contracted.

CASE 4.—*History.*—Mrs. B. M., aged 64 years. O. S. struck by a stone in childhood, destroying vision. Dense leucoma above, chorioidal cataract, calcareous deposit; exclusion of pupil. T—1. Lpc. good. Lpj. fair. O. D. recurrent attacks of inflammation for seven years, posterior synechiæ and cataract. Counts fingers at 6 inches. Extraction with iridectomy, both eyes, in 1907. Site of incision has become densely leucomatous. O. D. shows capsular area above, iris drawn up. O. S. complete membranous occlusion of pupil.

Operation.—Oct. 7, 1907, V-shaped incision was executed entirely in the iris tissue of O. D., the pupil spreading out into an ovoid shape (Fig. 46), leaving area of capsule and small band of iris above. O. S. was operated on Jan, 13, 1908, by the same method, the resulting pupil being almost round (Fig. 47) owing to the resilient iris tissue.

The test for glasses, March 10, 1908, gave the following result:

O. D. $S + 12\ D \overset{\frown}{\smile} C + 1.25\ D$ ax. 135° $= 20/50$.
O. S. $S + 12\ D \overset{\frown}{\smile} C + 1.25\ D$ ax. 135° $= 20/70$.
Add
O. D. $S + 5\ D =$ J. 6.
O. S. $S + 5\ D =$ J. 12.

These were ordered in biconvex torics, which she now wears with great comfort. It is worth noting that O. S. still retained good visual acuity, although blinded by an injury nearly fifty years before.

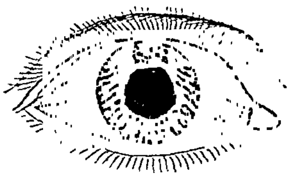

Fig. 46, (CASE 4).—Irido-capsulotomy, with band of iris, and capsule in coloboma above.

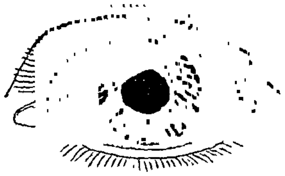

Fig. 47, (CASE 4).—Iridotomy with round central pupil in a resilient iris-membrane.

CAPSULOTOMY BY THE V-SHAPED METHOD

The application of the V-shaped method to capsulotomy shows an even greater field of usefulness, as this method is par excellence the best way of incising a delicate secondary capsular cataract. This should be done under artificial illumination. The pupil should be dilated, as the area of incision is necessarily smaller than in iridotomy, and unnecessary wounding of the iris should be avoided. The proposed capsular opening must be so calculated as to fall within the area of the undilated pupil, or partly within the coloboma if an iridectomy has been previously performed.

The knife-needle is entered at the upper corneal margin, passed across the anterior chamber to a point 2 mm. to the left of the vertical plane (Fig. 48), the capsule punctured by a quick thrust, and the saw-like incision carried from below upward, as in iridotomy. The knife is then raised up above the capsule and swung 3 mm. to the right of the vertical plane (*Fig. 49*), the capsule is again punctured, and a duplicate incision carried up to join the first, at the apex of the converging V (Fig. 50.)

Where the pupillary margin is adherent to the underlying capsule, or the pupillary space is too small, it may be necessary to start the incision in the iris tissue, a little below the pupil, and then cut upward until the knife emerges into the pupillary area, thus making an irido-capsulotomy. The soft iris tissue is easily incised if no pressure is made with the knife, and the sawing motion is maintained.

AFTER-TREATMENT

Postoperative inflammatory reaction is infrequent, but if it should occur the usual antiphlogistic treatment of atropin, calomel, ice-pads and leeching should be actively instituted and continued until the eye is absolutely quiet. The operation itself is frequently an antiphlogistic measure, because it relieves iris-tension and traction on the ciliary body. The usual compress of gauze and cotton, covered with a Liebreich patch, may be applied to the eye for the first twenty-four hours and rest in bed enjoined for that period.

IN CONCLUSION

We have carefully reviewed the history of iridotomy for nearly two centuries, and noted how the pendulum has swung from knife-needle to scissors, and back again. We have learned that Cheselden, the father of iridotomy, originated the method of incision by the knife-needle, which Heuermann modified, and Adams later revived and improved. We have seen how Janin abandoned this procedure and originated the scissors method, which Maunoir greatly improved and caused to hold sway for more than half a century. We have been deeply impressed by the fact that the mature, judicial mind of von Graefe led him to abandon the scissors and revert to the knife-needle method; and finally we have seen how, soon after his death, the great influence of De Wecker had swerved the thought of the ophthalmic world back to the adoption of the scissors method in a greatly improved form.

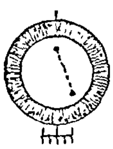

Fig. 48.—Author's V-shaped capsulotomy. Plan of first incision.

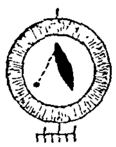

Fig. 49.—First incision completed. Plan of second incision.

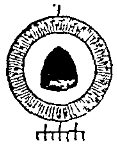

Fig. 50. — Pupil resulting from V-shaped capsulotomy.

Whether I have succeeded in citing sufficient facts and arguments to establish my thesis in favor of the knife-needle, or not, I nevertheless submit to the profession my V-shaped method of iridotomy and capsulotomy with a confidence born of twenty years' successful experience in its use, and with the hope that it may prove equally efficient in the hands of others who will take pains to study and understand the method, and who may have the patience to put it in practice.

1625 Walnut Street.

ABSTRACT OF DISCUSSION

DR. GEORGE E. DE SCHWEINITZ, Philadelphia: Although Dr. Ziegler only now publishes this detailed account of his operation, he gave a description of it in 1896 in one of the editions of my text-book. I mention this in order that Dr. Ziegler may have full credit for an early record of this ingenious operation. My experience with the operation has been limited but entirely satisfactory. I have found it more satisfactory and less dangerous than iridotomy or iridectomy. I call especial attention to the necessity of a properly constructed knife, as the ordinary knife-needle used in discission after cataract is not a satisfactory instrument for this operation. I have not employed this operation in uncomplicated after cataracts, as for them I still consider Knapp's knife-needle operation the best one. Ziegler's operation is more satisfactory for complicated after-cataract and closed pupils following iridocyclitis and thick membrane remaining after needling part of the iris-membrane. If the flap does not roll back of its own accord it may be pushed downward with the point of the knife. When the operation is completed the knife is again turned on the flat and quickly withdrawn.

CAUSES OF FAILURE

The most fruitful sources of failure are, first, a poorly sharpened knife-needle; second, a badly planned incision; third, inability to sever the apex of the triangle; fourth, the early loss of aqueous; fifth, too heavy pressure with the knife-edge, and sixth, rocking or rotating the knife backward instead of making the sawing movement. All of these can easily be avoided, if the surgeon will only exercise care and good judgment.

In an occasional case, the iris-membrane may be so stiff that the apex of the flap will not retract. If the apex can not be pushed down by the tip of the knife turn the blade on the flat, puncture the base of the flap by a quick thrust, and with a sawing motion cut across its fibers so that it will fall back as though hinged; or, if positive that the vitreous is not fluid, introduce a keratome in the cornea below, draw out the triangular tongue, cut it off with the iris scissors, and dress back the base with a silver spatula.

It is possible that the capsule, or iris tissue, may lose its anchorage. In that event we must either reverse the procedure by entering the knife-needle below, and cut from above downward, or else pass a second knife-needle through the loosened edge of the membrane to fix it, and then proceed with the usual method.

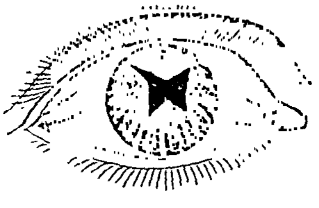
Fig. 42 (Case 1).—Iridotomy in a stiff iris-membrane (author's original case).

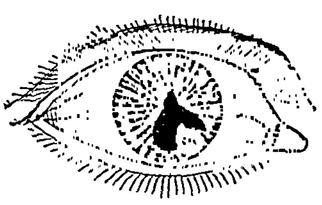
Fig. 43 (Case 2).—Iridotomy in a soft eye-ball, with dense iris-membrane.

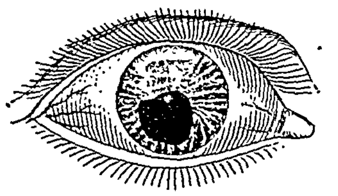
Fig. 44 (Case 3).—Iridotomy in a soft eyeball, with thin membrane and iris bombé.

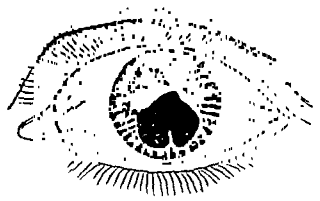
Fig. 45 (Case 3).—Iridotomy showing apex of iris flap after incision through adherent fibers.

Occasionally, the apex of the triangular flap will hold fast, because the last fiber of tissue has not been severed. If the leverage is too short to incise it from above, withdraw the knife-needle and reintroduce it far enough from the apex to secure the proper leverage, and again incise it gently, until it falls back.

Traction on the ciliary processes, accidental puncture of the ciliary body, or the tearing of the membrane from its ciliary attachment may all set up iridocyclitis or glaucoma, and should therefore be avoided. As tense capsular bands are liable to engender a similar condition they should be incised. If any of these traction bands should remain in the edge of the coloboma, we may enter the knife behind them and gently saw through into the already cleared pupil, before withdrawing the knife.

ILLUSTRATIVE CASES

I will briefly cite a few examples of the V-shaped operation, two that were my first efforts, and two that were recent cases. They were all of the class that are often abandoned as hopeless; hence the visual result is far below the operative success.

Case 1.—*History.*—F. M., aged 65 years. O. D. complete membranous occlusion of pupil from iridocyclitis, following cataract extraction. The iris and capsule are tensely drawn up toward the ciliary border. Light perception and projection good. Several efforts have been made to incise the membrane, but without success. Admitted to Wills Hospital by the late Dr. Goodman, through whose courtesy I operated.

Operation.—On Jan. 15, 1889, I made two long incisions, almost crucial, and extending beyond the apex of the V, resulting in a W-shaped pupil, on account of the stiff iris membrane (Fig. 42). With S. + 10 D. he saw 20/50.

Case 2.—*History.*—J. S., aged 30 years. O. S. injured and enucleated. O. D. sympathetic inflammation, chorioidal cataract; three discissions and one iridectomy, down and in. Membranous occlusion of pupil. I first saw him in 1888 while house surgeon at the Wills Hospital, where iridotomy was skilfully performed nine times by one of the surgeons, the methods being varied and ingenious, but without success, as the incision was invariably closed by plastic exudate. My interest in this series of operations first drew my attention to the subject of iridotomy, and stimulated me to develop the method I have here submitted and which I first tried in Case 1.

One year later this patient came to my clinic at St. Joseph's Hospital. Iris was discolored, capsule thickened and visible through the coloboma, down and in; areas of scleral thinning, with pigmented chorioid showing through. T—3. Light perception good, projection only fair.

Operation.—On June 17, 1889, I made a V-shaped iridotomy along the outlines of the former iridectomy. The membrane freely opened up into a triangular or pear-shaped pupil (Fig. 43), which proved permanent, but was only useful for quantitative vision, about 5/200. No further test could be made because the disorganized vitreous was filled with floating masses. I have seen him within a year, going about and earning his living. From an operative standpoint I have always considered this early effort one of my most successful cases, chiefly because of the great density of the iris-membrane and the lowered tension of the eyeball.

Case 3.—*History.*—Mrs. A. D., aged 45 years. O. D. iridectomy for glaucoma seven years ago. O. S. iridectomy two years ago by another surgeon, at which time there occurred slight incarceration of iris, followed by sympathetic ophthalmitis in O. D. The severe iridochorioiditis resulted in cataract and some shrinkage of globe. The cataracts were extracted from both eyes in 1907, followed by dense opacity of cornea above, iris bombé, shallow anterior chamber, T—2. Here was a soft, distensible, iris tissue with shallow anterior chamber and greatly lowered tension of the eyeball, constituting one of the most difficult conditions to operate on.

Operation.—On May 13, 1907, the eyes being quiet, and light perception and projection fair, V-shaped iridotomy was performed on both eyes. The leucomatous areas in the upper part of cornea necessitated making the pupil below. In O. D. the pupil opened up beautifully (Fig. 44), but in O. S. a tag of iris hung fast (Fig. 45) and was again incised two months later. The artist has illustrated the remaining portion of this tag very well. As soon as the iris tissue was incised it retracted, making the pupils larger than the area of incision. The test for glasses, nearly a year later, March 15, 1908, yielded the following result:

O. D. S + 13 D $\overset{\frown}{\smile}$ C + 4.75 D ax. 105° = 20/40.
O. D. S + 13 D $\overset{\frown}{\smile}$ C + 3 D ax 65° = 20/40.
Add
O. D. S + 4 D = J. 10.
O. S. S + 4 D = J. 10.

These were ordered in biconvex torics. She had worn glasses for a year, but claims vision is much better with the new ones. This seems like an excellent result when we consider that these

THE PROPER METHOD OF DETERMINING ERRORS OF REFRACTION

AND THEIR ACTUAL RELATION TO THE AILMENTS OF THE HUMAN BODY

D. B. ST. JOHN ROOSA, M.D., LL.D.
NEW YORK

Although I think that there is a general agreement among ophthalmologists as to the principles and practice of adjusting glasses to the human eye, there are few, chiefly in this country, who with very little intermission vociferously protest that most methods except their own are imperfect, or even altogether wrong. One writer goes so far as to say that there are no schools of instruction where determination of the refraction of the eye is properly taught and that dire consequences are resulting from this circumstance and from the wrong methods of ophthalmologists in general.

EXAGGERATED VIEWS OF THE RESULTS OF EYESTRAIN

The constant appearance of articles written in this strain, with exaggerated statements as to the consequences of wrong methods, the almost frantic appeals from these writers that eyestrain shall be more correctly studied and treated, induce me again to ask the indulgence of general practitioners, and perhaps some of the younger ophthalmologists, while I present what I conceive to be safe and sane views on this subject. These views I also believe in the main are those of the majority of ophthalmologists, and the practice of which are accomplishing about all that may be properly and reasonably expected from the use of glasses to correct errors of refraction or weakness of accommodation (presbyopia).

The general practitioner, I am sure, is anxious to understand in a general way what are the limitations in the efficacy of glasses for symptoms that are not obviously those pertaining to clear vision and the regular and continued use of the eyes, and he finds widely varying opinions as to the therapeutic value of glasses and the proper method of choosing them.

There are a few ophthalmologists who consider that many general morbid conditions of body and mind result from the non-use or improper use of glasses. Ophthalmologists in general find in glasses a remedy for ocular defects only, and believe that the benefits of glasses are chiefly and generally limited to the correction of ocular defects. The hopes of those who found in the correction of hypermetropia and astigmatism, whether existing singly or in combination, a remedy for any class of nervous disease have had the same disappointment as was shown very long ago.

Properly chosen glasses will often relieve headaches that may be easily traced to excessive use of the accommodating power, certain forms of chronic conjunctivitis, blepharitis ciliaris, mild forms of lachrymal catarrh, diplopia, vertigo and nausea, coming on after continued use of the eye, at a play or at a musical concert or visit to a picture gallery, for instance. This, to my mind and experience, comprehends about all that may be expected from the use of glasses. It is still thought by a few observers that migraine is often relieved by proper correcting glasses, but this belief I do not share, and I have made innumerable efforts to relieve migraine by such means and finally have abandoned them. Certain ophthalmic writers in this country assert that failure to relieve migraine and more serious affections of the nervous system is due to a want of proper choice and adjustment of the glasses, although the authorities who have reported such failures are adjudged by the profession to be competent oculists.

THE ART OF FITTING GLASSES NOT OF SUPERHUMAN DIFFICULTY

Even more radical statements than these are made, namely, that few ophthalmologists in the whole civilized world know how to fit glasses properly.

To this style of argument, which, strange to say, finds a place in respectable medical journals in this country, it is scarcely possible to give a serious reply. Since these views get a wide circulation in the profession, to leave them unanswered is to leave them to be considered unanswerable by some. I undertake to present another view from this. I do not think that the science and art of choosing glasses correctly is as difficult as in certain quarters it is said to be. Any well-educated medical practitioner, by careful study and large experience, such as is obtained in special hospitals and clinics, may expect in a few months to be able to fit glasses to the eye properly, and also to eliminate those cases in which glasses will be of no service, provided this experience is begun with a fairly critical knowledge of optics and the various errors in the refraction of the eye, as first formulated by Donders. There is no special difficulty in the attainment of this knowledge, any more than there is in becoming an expert in auscultation or percussion, or a bacteriologist or pathologist. In short, there is no more difficulty in becoming an expert in this department than in any other of our science and art. The erroneous opinion that only a few have ever accomplished this is one that is widely promulgated by a very few ophthalmologists.

In the nature of things, the acquisition of the knowledge necessary for the practice of the correction of errors of refraction can hardly be originally and intrinsically so difficult that only a very few of the well-educated practitioners of the wide earth can ever acquire it. One of the grounds given in one quarter for the belief that the knowledge necessary to the adjustment of correct glasses is such an intricate and difficult thing to acquire is that so many errors fatal to the success of getting the proper glasses are fallen into, even by those of special education and experience, and that thus the results are entirely unsatisfactory. Such a view as this almost involves the idea of divine or demoniacal inspiration as necessary for the proper practice of this part of ophthalmology. But this is an utterly incorrect and even ridiculous view of the situation, and a few obvious facts controvert it.

Before Donders' discoveries and his classification of ametropia into hypermetropia, myopia, corneal astigmatism, either myopic, hypermetropic or mixed, with failure in accommodation and presbyopia, which reached the English-speaking profession in 1864, the civilized world got on with imperfect concave and convex spherical glasses chosen usually by the patient with the assistance of the vendor, who had only the most rudimentary knowledge of optics. Indeed, scientific men, with a very few exceptions, such as Thomas Young, possessed only a rudimentary knowledge of the refraction of the human eye; yet in those centuries on centuries of civilization in which no accurate fitting or correcting of glasses existed, when men and women probably had the same errors of refraction as now, Greek, Roman, French, German and English literature and art reached a high of some congenital cataracts. I consider that the operation has a wide field of usefulness.

Dr. C. H. Williams, Boston: I think that we shall sometimes be disappointed in the amount of opening we finally obtain after operations on the iris for artificial pupil, especially where there is a membrane of inflammatory deposit behind the iris. I had a case which illustrates the need of a large division in order to obtain a serviceable pupil. A sea-captain of 70 years came to me with a history of repeated attacks of iritis in each eye. There had also been some cyclitis in the left eye and in that eye there was not even perception of strong light.

In the right eye an iridectomy had been done some time previously for closed pupil, and the patient had good light perception but nothing more. A cataract having developed in this right eye, it was finally decided to make an extraction, which was done without special difficulty. After the extraction the pupil gradually filled with a whitish deposit and the iris was drawn upward to the corneal cicatrix, the vision being again reduced to perception of light. Four months after the extraction. the eye having become comparatively free from inflammation, a division of the iris and the membrane behind it was made by passing a Graefe knife through the upper part of the cornea directed toward the center of the eyeball, so as to penetrate the iris and membrane. De Wecker's scissors were then passed into the wound and a cut was made from above downward to within about 3 mm. of the lower part of the iris, which resulted in a cat's-eye pupil through which the patient could see to play cards for about one month.

After this, the pupil became blocked by a whitish deposit beginning at the lower part and extending upward. Five months later a second attempt to make an artificial pupil was made by passing the Graefe knife through the outer edge of the cornea and following this by three cuts with the de Wecker scissors. one horizontal. one upward and inward, the last downward and inward. This resulted in a stellate-shaped pupil of good size. After a time the same process as before began to fill up the pupil, but it only went so far as to fill up the stellate rays, leaving the center of the pupil free, and the patient now has, with his correcting glasses, vision of 3/10 and can read ordinary newspaper print.

Dr. Edward Jackson, Denver: I have been familiar for years with Dr. Ziegler's work. When I was at the Wills Eye Hospital fifteen years ago, and before that I had followed in the main the mechanical methods that he has followed. No one who has not tried such an operation in difficult cases, such as Dr. Williams has mentioned, can realize the wide applicability of the method. I am sure that within the last ten years I have not used the de Wecker scissors in any case, and in some that looked quite as bad as the one Dr. Williams has spoken of I have obtained a good pupil with comparative ease. In reference to gaping of the opening. to which Dr. Ziegler alludes in his paper, it is absolutely essential that the two incisions meeting at an angle shall come together. If there is the least little shred of tissue left, it holds this tongue of iris and membrane in position, and you fail to get a good pupil. If your knife is sharp enough, there is no need for any more than the minimum amount of pressure. The tougher membrane will require the sharper knife and will require longer sawing, but if you carefully observe the mechanical conditions very tough membrane can be disposed of in this way. Leverage is of great importance. You should at least have a leverage long enough to maintain its proper relation to the incision in the membrane. Its best relation is pretty nearly perpendicular. By going into the limbus you get the longest leverage.

Dr. John Green, Jr., St. Louis: Occlusion of the pupil consecutive to severe iridocyclitis after combined extraction usually presents a membrane occupying the site of the original coloboma. If in such a case the margin of the upper lid, in distant fixation, does not encroach appreciably on the cornea the following procedure is applicable: A keratome with the tip directed toward the center of the globe is made to penetrate the membrane exactly at its junction with the iris tissue. A very narrow Graefe knife with the cutting edge forward is then made to divide the lateral bands at their junction with the iris tissue. The resulting pupil is usually circular. My belief is that, when possible, we should avoid additional operative traumatism to the iris tissue which has shown itself so prone to react to injury.

Dr. Albert E. Bulson, Jr., Fort Wayne, Ind.: I have used two knives of Dr. Ziegler's pattern, according to his method, in three different cases, with excellent results, but it is my opinion that the knives should always be of proper form and in perfect condition as to cutting edge and point or otherwise the operator will be disappointed in his results. The shank in particular should be in proper shape and not taper if loss of aqueous is to be avoided. A Ziegler knife with a sharp cutting edge will permit of incision through a rather tough membrane without traction. The knife is also an ideal one for the ordinary operations for secondary cataract.

Dr. M. Wiener, St. Louis: I have used this excellent operation for the last few years and found it better than any method I have used previously. One class of cases in which I found difficulty was those with very shallow anterior chamber and lowered intraocular tension; and another in which we have anterior synechia, the iris attached to the cornea irregularly.

I should like to ask Dr. Ziegler what he does in these conditions. If there be only one spot where it is attached, by a sweeping motion it can be detached before the V-shaped incision is made. I have found that I can get along a little better by having the blade a little shorter than the one used by Dr. Ziegler. I had some knives made with the blade about two-thirds the length; in other respects the same.

Dr. S. L. Ziegler, Philadelphia: The reference which Dr. de Schweinitz has so kindly made to his success with this operation in cases of membranous occlusion of the pupil leads me to believe that his adoption of this method for all of his cases of capsulotomy is only a question of time. The V-shaped incision is undoubtedly the best one for securing a satisfactory opening in any type of membrane, whether thick or thin. The incision can, of course, be placed in any part of the membrane and in any direction that you may wish to locate it. I do not believe there would be the slightest difficulty in securing good results in the cases Dr. Williams describes. I am sure that such drawn-up iris membranes will easily yield to this operation. The first case I present in my paper illustrates this condition exactly. The second case was a similar one, the membrane being very dense and the eyeball soft. In both cases the operations were successful, and the results have been permanent. Of course, you do have failure in these cases by the older methods. If the operation is properly performed, however, there can be no pressure and no traction. In fact, I explicitly state in my paper that both pressure and traction must be avoided, or failure will surely result.

One of the chief causes of failure in all methods of iridotomy has been the single incision, which is so liable to close up. We must make a double incision. The V-shaped cut has proved to be the most efficient in my hands. The ultimate shape of the pupil formed by the V-shaped method depends almost entirely on the degree of stiffness or resiliency present in the iris membrane.

Anterior synechiæ may be successfully freed with this form of knife-needle. In the cases to which Dr. Wiener refers a little shorter blade might be better, because of the cramped position. For the long sawing incision of the ordinary case of iridotomy, however, I consider this model of knife-needle just about perfect. Dr. Wiener also asks as to the degree of success in soft iris membrane. Case 3 is one of iris bombé in a soft eyeball, and well illustrates this condition. This membrane followed glaucoma and iridochorioiditis. I was able to make an incision in it which opened the pupil even wider than I cared to have it. This operation should not be condemned because the first trial results in a failure. On the contrary, the V-shaped method should be studied and practiced until the failures are practically nil.

hypermetropia disappears with advancing years and the development of the globe, and the owners are in a vast majority put to no inconvenience on account of their eyes. The great error that was made by those who for years laid great stress on errors of refraction as causing epilepsy, chorea, and even idiocy, was in assuming that a low degree of hypermetropia was a refractive error requiring correction. It was very soon shown that thousands of human beings were hypermetropic without having nervous disease. The field of abnormal refraction is actually not entered as far as hypermetropia of a low degree is concerned. It is not reached unless it is of a degree higher than, for instance, two diopters, or unless corneal astigmatism is added to it.

It is an interesting fact that Jaeger the younger, professor in Vienna, who did some of the first and best work with the ophthalmoscope and in illustrations of the fundus oculi, taught that myopia was the usual, if not normal, refraction of infants. The work of my assistant, the late Dr. Edward T. Ely, showed that hypermetropia and not myopia is the usual refraction of the newly born.

CAUSES OF ASTHENOPIA

It is established now, as Donders thought in his first promulgation of his classification and the means for its relief, that in the refraction, in the static condition as he defined it, is to be found the cause of asthenopia and not in the external muscles. Here only do I find myself at variance with many writers of this country. I deny the existence of muscular asthenopia, except as dependent on errors of refraction, standing by my views expressed in 1890.[1] I do not find any value in prisms or in decentered glasses, except in cases of paralysis of the ocular muscles, and for years I have not prescribed them, except as above indicated. I think them of no value except in actual paresis. In astigmatism I find the great source of asthenopia and imperfect vision in cases of error of refraction. While in hypermetropia in young subjects, of a degree sufficient for correction with no astigmatism sufficient for correction, we may expect a diminution of the hypermetropia; this is not the case in myopia, which generally becomes of a higher degree until adult life is reached, although in subjects of advancing years it is by no means an uncommon thing, contrary to what is sometimes taught, to see myopia steadily decrease in degree from 50 years or more on, so that weaker glasses may be worn. This is due in part to flattening and hardening of the crystalline lens.

In passing it may be said that it is now pretty generally conceded that full correction of myopia is best for the comfort and safety of the patient. To see as well as one can is always desirable, and I have no fear, like that so often expressed among the laity, of having glasses too strong, either in myopia or hypermetropia, so long as those chosen give the best vision. If they secure this and the patient complains of pain, it may be assumed that the pain is not from the wrong glasses but from the eye itself.

It is well known that morbid conditions in the cornea are very common in myopia. The habit of many patients with unsatisfactory vision of going about from one authority to another, seeking to relieve their ocular discomforts by a change of glasses, is greatly to be deprecated. When glasses are so frequently changed the fault will sometimes be found in the oculist who ventures on treatment as suggested and yields to the wish of a neurotic patient to have an infinitesimal change made. I do not believe that a difference such as a quarter of a diopter will make any essential difference in the vision of a patient, and especially not in his ability to use his eyes without headache or other asthenopic symptoms. The army of neurasthenics and other neurotics who form such a considerable portion of our people both among the lofty and lowly, by their undue influence on the profession, have worked great harm in lessening the number of safe and sane ophthalmologists. The late Dr. George M. Beard, who first employed the term neurasthenia, as I know from an intimate acquaintance, when he invented the term never dreamed that its application to human maladies would be so amplified as we find it now. This amplification may be entirely justified and may not, but the not uncommon suggestion that eyestrain is at the basis of neurasthenia really means that endless nervous symptoms are produced by want of balance of eye muscles. Unprejudiced judicial examinations made by thoroughly educated and widely experienced men, in my opinion, show the belief that eyestrain causes neurasthenia to be incorrect.

What I believe to be almost infallible evidence against the existence of eyestrain in a given case is the absence of ocular symptoms. If there is a symptom reflected from the eye there will always be found a condition in the eye to justify such a reflex affection; there will be watering of the conjunctiva or of the lachrymal sac, inflammation of the edges of the lid, hordeola, inability to use the eyes, sensations of sand in them, headache on use of the eyes; in short, before there is eyestrain there is always some symptom in the eye itself.

It is not true, I think, that imbalance of the ocular muscle or an uncorrected error of refraction causes a disease in another part of the body unless morbid conditions and symptoms can be found in the eyes themselves. Then abnormal conditions, such as mixed or double astigmatism, may exist, and while they are the cause of defective vision, they may beyond that have no effect on the general system. I have seen patients recover from such an affection as chorea and other forms of nervous disease without having had any correction of errors of refraction of a disturbing kind.

Indeed, I think that most of the very modern literature on eyestrain which ascribes almost any manner of disease to the eyes is highly illogical and scarcely supported by facts; but it will not be long before its true character will be found out by the disappointed neurologist or general practitioner who had expected a cure of organic disease by a correction of the imbalance or of an error of refraction.

I have seen many patients constantly wearing glasses which reduced their visual power considerably, having been told to persist in their use, for the glasses would finally work a cure for their various general symptoms. The fact is that if glasses do not improve the vision and are not comfortable on the eyes they are absolutely of no use. There is no mysterious virtue in them, if they do not at least clear the vision, and if they are not comfortable when worn.

Eyestrain, so called, as determined by the measurement of the power of the constantly varying power of the external ocular muscles has been, in my judgment, greatly misused in diagnosis. If the profession will abandon all attempts to measure the power of the ocular muscles, except in paresis and consequent diplopia, and confine the work of fitting glasses to correction of errors of refraction, myopia and hypermetropia, with the coexistent astigmatism, ophthalmologists will not suffer the opprobrium that once attached to the men who found in the ovaries and movable kidneys all the diseases of the female system. In my opinion, it will not be many years before no diseases except those clearly recognized in the early years of the specialty by the ophthalmologists who follow Donders and Graefe, as coming from errors of refraction, will be deemed to result from errors of refraction or imbalance. All the indications are that way, for we have passed through the day when it was believed that in the correction of eyestrain by glasses or by operation on the ocular muscles was found a remedy for epilepsy and chorea and idiocy. Migraine and neurasthenia will soon cease to be treated through the muscles or refraction of the eye. No one except a few extremists with no following, men who can no longer get a hearing in an ophthalmological society, find in errors of refraction and their improper correction every imaginable disease, mental and physical. The community in general has been so stirred that great numbers of people talk of eyestrain as if it were the cause of all their ailments. They come into our consulting-rooms with the firm conviction, in many cases produced by the family practitioner, that if the muscular balance can be restored by the proper glass, all their aches and pains will vanish.

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[1] Ophth. Rev., October, 1890.

THE PROPER USE OF TENOTOMY AND PRISMS

The practitioners who lay so much stress on the restoration of the muscular balance have grown a little shy of graduated tenotomies and of all operations on the muscles. Yet in cases of diplopia or want of binocular single vision a complete and thorough operation on the offending muscles (provided the operator is sure to operate on both of the fellow muscles) will now, as always, accomplish all that can be desired in the relief of ocular symptoms. It is the indiscriminate operations founded on fallacious tests of the power of the muscles that have done the harm. Very satisfactory results are obtained from tenotomies in properly chosen cases, especially if the Panas method is followed, stretching of the muscles being practiced in combination with the tenotomy. and both muscles being operated on at the same sitting.

Cases of insufficiency or diplopia requiring prisms for their correction. in my judgment, always require tenotomy. if the asthenopic symptoms are sufficient to be disturbing. It seems to me always better when the properly chosen spherical or cylindrical or a combination of these glasses do not afford relief, as they will in many cases of diplopia. to operate than to delay, and above all not to subject the patient to frequent changes of glasses. in the vain hope of finding those that will accomplish a result, after those have been tried that answer the test of a critical examination. Such a practice is to be likened to a looking about in the medicine-chest for a medicine to cure an undiagnosticated disease. Indiscriminate tenotomy has been generally given up for the cure of these cases of muscular insufficiency. but there still exists a want of appreciation of what I have long since shown. namely, that since there is so great a variation in the power of these muscles in persons who have no asthenopia, we can not conclude that these patients with lessened power or variations in power demand any treatment of the muscles except that which they undergo in the correction of the error of refraction or in that of the general health-- for there is a neurotic asthenopia.

The treatment of the ocular muscles by systematic exercise with prisms has, I think, been pretty generally abandoned, as it deserved to be, except in cases of strabismus, in which the stereoscope is very useful and even essential after tenotomy in the effort to secure binocular single vision.

DETERMINATION OF THE REFRACTION

Although for some years previous to 1888 I had nearly given up any use of prisms in glasses prescribed for asthenopia, it was in that year, after the perfection of the ophthalmometer by Javal, that I also definitely gave up the use of a cycloplegic in the determination of the errors of refraction and the prescription of glasses. except in those rare cases of spasm of the accommodation. In 1876,[2] in a paper on blepharitis ciliaris, which I showed to be very often the result of an error of refraction, I was one of the very first writers, if not the first, to insist on the use of atropin or other cycloplegic for the positive determination of the degree and nature of an error of refraction. My attention was first called to the causation of blepharitis ciliaris by a severe case of error of refraction from instilling atropin and paralysis of the accommodation which had lasted for years in spite of the ordinary treatment. The improvement of the patient's appearance was so great in twenty-four hours that I believed I would find in a proper correction of the refraction a relief from the troublesome inflammation. This proved to be so, and caused me to test every patient of this kind for glasses. This I did while the eye was under the influence of atropin, but with an exact measurement of the degree of corneal astigmatism I no longer find the cycloplegic necessary. If, however, a case of severe blepharitis ciliaris be found, it is still good therapeutics, if the disease is very annoying, to get the eye quiet and the lid free from redness by the instillation of atropin three times a day. It was then, and remained for several years, my almost invariable practice to use atropin in all cases that were not presbyopic before prescribing, and I know that this became the ordinary practice in the Manhattan Eye and Ear Hospital, where I was then an attending surgeon. This is a troublesome, tedious and even distressing practice for the patient; for the oculist it is also very tiresome and monotonous.

Since there was no other way. however, as I then supposed, for the determination of the degree of astigmatism, mixed or simple, and of the hypermetropia. with what proved to be only a bogey spasm of accommodation always before me, I persisted in it. But when Javal and his student and formerly my own, George J. Bull. showed me the precision and ease with which the perfected ophthalmometer would measure corneal astigmatism, and when I had learned from Bull how to use the instrument, I saw that in my practice. at least. the use of a cycloplegic as a means of determining the refraction was ended, for it was just to ascertain the existence of corneal astigmatism and its degree that the atropin or other cycloplegic was used. With the perfection of the ophthalmometer dawned a new era in ophthalmology. What Helmholtz labored for and accomplished only in a very poor way with an instrument difficult to use and altogether consuming too much time to be of use in the consulting room and only fitted for the laboratory, Javal accomplished in a perfect manner, for which he should receive everlasting praise. On my return to New York I brought the ophthalmometer into use in the Manhattan Eye and Ear Hospital, where it soon totally displaced the use of cycloplegics and the practice of retinoscopy for the determination of refraction. Although Javal's instrument was well known to a few ophthalmologists of America, Swan Burnett having exploited it in his work on astigmatism, and Noyes having demonstrated the method of use, it was not, strange to say, generally used except as a scientific toy, but it gradually commended itself to very many. I persuaded Mr. Geogen, the optician, to make ophthalmometers in this country, which he did in the very best manner and at a price as low as that for which they could be obtained in Paris, so that they became generally accessible. After him came Meyrowitz, who continues to make the ophthalmometer on Javal's latest model—that of 1907. This is not sensibly different from that of 1888, but conveniences have been added to the work of adjustment in the steadiness and precision of the instrument by A. E. Davis, Dennett, Skeel and others. The work, however, was done in 1888; the egg was made to stand upright when an ophthalmometer was presented to the profession which enabled an expert to measure the radii of the cornea in three or four minutes. With me it did not displace retinoscopy, for I had already fairly tested this ancient method of determining the refraction, and, largely counseled by the late Dr. E. G. Loring, I had abandoned it as "the most difficult and least satisfactory of the methods of determining the refraction of an eye, which contributes nothing that can not be more easily and more expeditiously performed by the upright image."

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[2] Tr. Am. Ophth. Soc.

Before leaving this subject of determining the refraction of the eye I may be pardoned one word in deprecation of the use of the phrase, "to refract an eye." This is quite frequently used instead of the longer but correct term, "to determine the refraction of the eye." It is to be earnestly hoped such a barbarism as "how to refract" may speedily be abandoned by all who have any desire for the preservation of the purity of the English tongue.

With the ophthalmoscope, the ophthalmometer and the test types we have all the means, in my judgment, that are in any sense required for the work of selecting correcting glasses. It is only in exceptional cases, in which spasm of accommodation exists, that a cycloplegic should be used. The ophthalmologist of experience, with these instruments, with patience and care in his subjective and objective tests, will at the most in two or three sittings, be able to say positively, even in the most tedious cases, when the axes of greatest curvature are not vertical or horizontal but oblique and differing in the two eyes and when there is mixed astigmatism. All this in an unintelligent patient makes a trying combination, but experience and patience and skill will finally accomplish a perfect result.

In high degrees of corneal astigmatism there are patients who at first, perhaps for months or even years, will not be able to tolerate glasses with full correction; but knowing exactly what full correction is, and having the patient under observation, the oculist can make a change whenever the patient becomes able to tolerate the glasses theoretically adapted to the refraction of the eyes. The objection to this method has been often made by one writer that the determination of the corneal astigmatism by the ophthalmometer is a method with a machine. This is to me an absurd criticism. Some of the best work in science is done with a machine. The sextant also is only a machine, but with a clear sky and a mariner of learning and experience behind it it does not fail to determine the location of the ship. Thus we might go on: the urine is examined with a machine, the blood count determined by a machine.

Fortunately, the use of the ophthalmometer is easily learned. With a good teacher, in two weeks' daily practice, a man at all skilled by education and experience in other manipulations and observations will be able to go on by himself, with a constant growth in the facility and exactness with which he can use this indispensable apparatus, for the ophthalmologist, Donders, left very little to be learned in the definition and description of the various errors of refraction and in affections of the accommodation, or in the affections likely to result from these uncorrected errors. Those who read his pages will learn that he anticipated almost all that has been said in the text-books and monographs on refraction and accommodation since his great treatise, except in regard to the measurement of corneal astigmatism; and this gap was filled by Javal and Schiotz. There is now no department of our science and art that can be more satisfactorily practiced than that of determining errors of refraction and of fitting glasses to the eye.

It is because so much is published in the medical journals on the immense difficulties of this art, which usually remains uncontradicted, that I have taken the risk of telling a twice-told tale. It may be of service, especially to those who are at the beginning of the practice of ophthalmology, to know that there remains a large class, of which I am a member, who adhere to the belief that the proper correction of an error of refraction is not exceedingly difficult to learn to practice, and who also still believe that no grave constitutional lesions depend on such errors. Those that are well known, most of which were described by Donders fifty years ago, such as headaches, blepharitis conjunctivitis, lachrymal catarrh—in short, asthenopia in its varied forms with imperfect vision from optical defects, the correction of which is the chief function of glasses—still remain easy of correction by a practiced hand. The proper functions of the human body do not altogether depend on the eye, however much its untrammeled and perfect use adds to our capacity for work and happiness. To this assertion may be added the statement that, after a thorough trial of tenotomies and prisms for the so-called imbalance of the eye, I have no use for them except in the unusual conditions of diplopia and strabismus and paresis already noted.

THE FAUCIAL TONSILS; A PROCEDURE FOR THEIR COMPLETE EXCISION *

OTTO T. FREER, M.D.
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Surgical operations which excise diseased tonsils completely are gradually replacing the hasty and uncertain manipulations with the tonsillotome and other implements which are apt to leave the base of the tonsil in the throat, experience having shown that such tonsillar remnants may contain tubercle bacilli, are prone to inflame, to hypertrophy, and to be the source of repeated peritonsillar abscesses.

Dr. Charles M. Robertson was one of the first to advocate a complete excision of the tonsil, and his demonstration of his scissors operation in the American Med-

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* Read before the Southwestern Kentucky Medical Association, Paducah, May 12, 1908.

ical Association in 1903 has done much to make tonsil surgery more radical.

In this paper I explain a knife-dissection technic for the complete removal of the tonsils adopted as my uniform operation after a trial of many methods. Its description is preceded by an outline of the anatomy of the tonsillar region, a brief recital of the indications for extirpation of the tonsil and reasons for abandoning imperfect methods of operating.

ANATOMY

The tonsil occupies a space called the tonsillar fossa, bounded posteriorly by the palato-pharyngeus muscle, forming the posterior pillar of the fauces or arcus palato-pharyngeus, and anteriorly by the palato-glossus muscle, forming the anterior pillar or the arcus palatoglossus. Inwardly the anterior pillar thins to a delicate, thin-edged fold of mucous membrane, normally overlying the foremost part of the tonsil and called the plica triangularis (Fig. 1, p). Above, to the extent of about the upper half of the tonsil, the plica triangularis is free so that a recess exists under it and it has to be pulled forward to uncover the anterior part of the tonsil. Below the upper half of the tonsil no recess exists under the plica, which is grown on to the tonsil in the form of a ribbon of mucous membrane. While hard to recognize in atrophic tonsils, in tonsillar hypertrophy the plica becomes very conspicuous, the tonsil, in enlarging, unfolding the plica triangularis and stretching it out as a broad band on its anterior and lower aspect (Fig. 5, p). Above, the pillars join to form a covering for the uppermost part of the tonsil, or velar lobe of Casselberry, so called because it extends up into the soft palate. Above the velar lobe is a recess of varying length and narrowness which extends outward and upward into the substance of the soft palate. This recess is called the fossa supratonsillaris (Fig. 1, f).

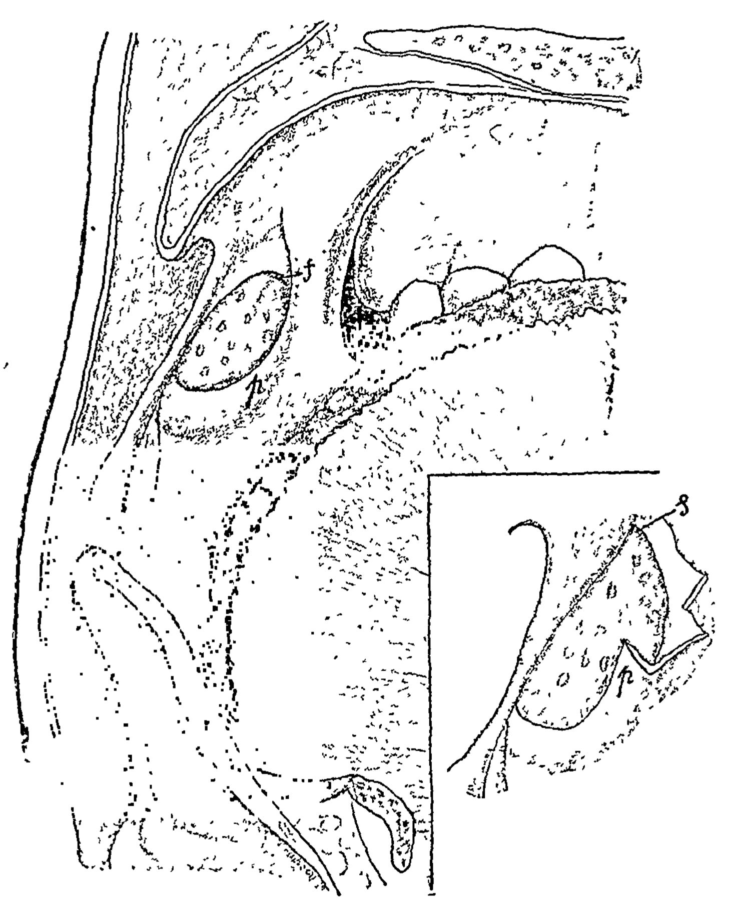

Fig. 1.—The tonsil seen from the side; f, entrance to the fossa supratonsillaris; p, plica triangularis. (Sketched from plate in Zuckerkandl's "Atlas.")

A number of crypts or follicles penetrate the tonsil, extending deep through its substance to its outer limits or capsule. The lower crypts lie horizontally, while the upper ones, originating in the fossa supratonsillaris, usually have a downward direction.

The outer aspect of the tonsil is attached to the tonsillar fossa and is usually encased in a fibrous envelope or capsule which may be well defined, merely indicated, or absent, some tonsils entering into the walls of the tonsillar fossa without definite boundary.

Externally the tonsil is usually loosely, but sometimes closely, attached to the fascia of the superior constrictor of the pharynx (Fig. 2). Outside of the superior constrictor lies the lateral region of the neck called the pharyngomaxillary fossa. It is filled with areolar tissue and is limited externally by the internal pterygoid muscle and internally by the fascia of the superior constrictor. The styloglossus and stylopharyngeus muscles traverse this space from behind forward and downward. Behind them lie the internal and external carotid arteries, which are thus fortunately situated too far behind and external to the tonsil to be endangered in operations for its removal (Fig. 2).

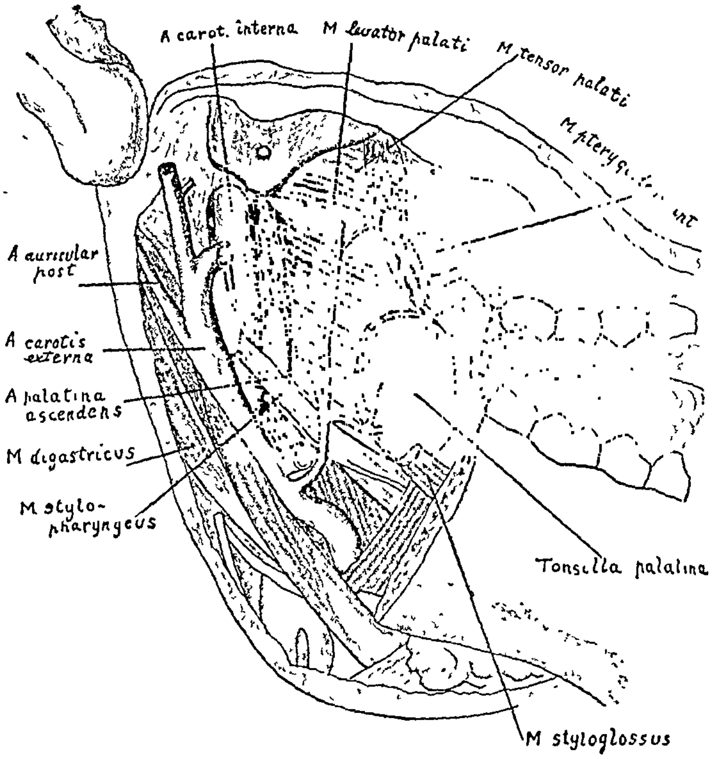

Fig. 2.—The external surface of the tonsil with its anatomic relations. (Sketched from plate in Zuckerkandl's "Atlas.")

Dr. John Gordon Wilson[1] describes the ascending palatine branch of the facial artery as the main source of blood supply to the tonsil, the small tonsillar artery arising from it piercing the aponeurosis of the superior constrictor muscle and penetrating the tonsil in the deepest part of the tonsillar fossa. In Figure 2 the ascending palatine artery has an exceptional origin directly from the external carotid.

While the arteries of the tonsil itself are therefore small, the walls of the tonsillar fossa containing it have a rich blood supply, a number of arterial branches following the pillars upward and downward as a sort of vascular way. In accord with this distribution of the

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1. Some Anatomic and Physiologic Considerations of the Faucial Tonsil, THE JOURNAL A. M. A., May 26, 1906, xlvi, 1591.

circulation it is my experience that an excision of the tonsil by a dissection hugging it closely seldom produces prolonged bleeding, while wounding of the walls of the tonsillar fossa is very apt to lead to it. For this reason cutting the pillars in excising the tonsil should be avoided and the plica triangularis should always be left intact.

PATHOLOGIC CHANGES INDICATING EXTIRPATION OF THE TONSIL

Hypertrophy appears in two forms. One is the well-known spherically hypertrophic tonsil, which lies superficially and projects freely into the throat from a shallow tonsillar fossa (Fig. 3). It varies in size from slight overgrowth to tumor-like masses which nearly fill the throat and seriously embarrass respiration.

The second variety of hypertrophy (Fig. 4) is the intramural or buried tonsil, which can not escape into the cavity of the throat as it grows because a close aproach of the pillars of the fauces confines it to the tonsillar fossa, which it therefore distends and deepens. As they enlarge, buried tonsils force the pillars of the fauces inward toward the uvula until they nearly or quite touch in the center, the globular form of the tonsil underneath it causing the anterior pillar to bulge spherically. Palpation helps in the recognition of buried tonsils.

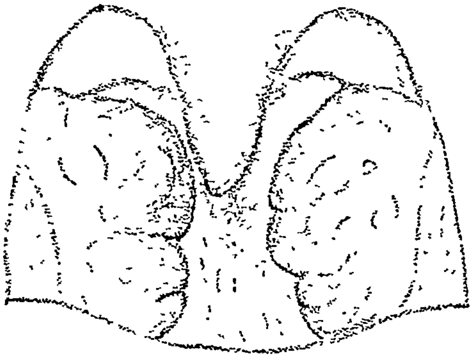

Fig 3.—Typical projecting tonsillar hypertrophy; suitable for the tonsillotome.

According to its size the buried tonsil obstructs respiration. By distending the muscular walls of the tonsillar fossa it interferes with the fine adjustment of the soft palate and thus makes enunciation indistinct, and by pressing on the Eustachian tube from below it endangers the ventilation of the middle ear. Drainage from the crypts of buried tonsils is interfered with by the overlapping muscular pillars, a condition favoring the occurrence of peritonsillar abscess.

A third type of tonsil, commonest in childhood, and normal or nearly so in appearance, needs extirpation because of excessively frequent attacks of follicular or parenchymatous tonsillitis.

The fourth variety needing complete removal is the cicatricial tonsil. It is the most difficult of all to excise because of its small size, its commonly firm fibrous union with its bed and its hidden position under the anterior pillar. The cicatricial tonsil is one shrunken by chronic inflammation to a hard nodule, and is permeated by crypts frequently distended by cheesy contents and often dilated into hidden little pus pockets which discharge foul tasting secretion of which the patient complains. He often learns to empty these pockets by finger pressure. Occasionally the fossa supratonsillaris itself is thus converted into a chronic ill-drained abscess, from which the pus may be made to discharge by pressure on the soft palate above the tonsil. On account of this tendency to retain septic matter the cicatricial tonsil is the one most liable to produce a series of peritonsillar abscesses, and it is on account of these that the patient usually asks for its removal.

In other cases the cicatricial tonsil does not create abscesses but makes its presence felt during swallowing and speaking by causing pain and discomfort in the throat hard to locate, until compression of the tonsil between a finger in the throat and one behind the angle of the jaw shows it to be the source of the disagreeable sensations, which disappear with its removal.

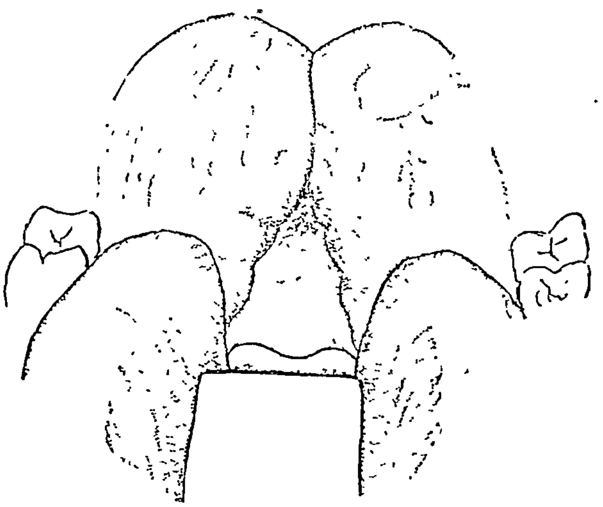

Fig. 4.—Extreme type of buried tonsils forcing the pillars together and hiding the uvula from view. The tongue is depressed until the epiglottis shows. (Sketched from life.)

In some cases of cicatricial tonsil which I have seen the chronic inflammatory process extended beyond the tonsil into the pillars of the fauces, causing them to become thickened and persistently swollen, so that they nearly or quite hid the offending tonsil. This chronic inflammatory thickening looked superficially so like a tuberculous or syphilitic infiltration that in one case a microscopic examination of an excised piece of the tissue was needed to make a diagnosis.

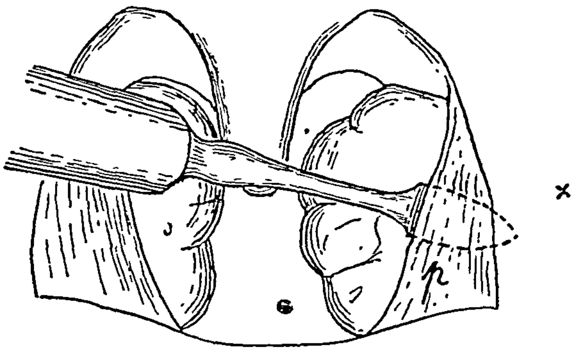

Fig. 5—Dissection of the plica triangularis and anterior pillar from the tonsil with the pillar knife. The site of the submucous injection is marked with a star (*).

IMPERFECT METHODS OF TONSIL REMOVAL

The Tonsillotome.—If this implement be of a size to exactly fit over the type of tonsil which projects freely from a shallow tonsillar fossa (Fig. 3) it will sometimes remove it completely. The more the tonsil approaches the buried variety, however, the less of it is included in the sweep of the blade of the tonsillotome and the greater is the danger that portions of the pillars will be drawn into the ring of the instrument and cut, with resulting serious bleeding. The tonsillotome has the defect of all automatic mechanisms designed to replace the intelligent work of simpler implements guided by the eyes and hand: it is only adapted to the one pathologic condition which was in its designer's mind when he devised it and it does not fit the endless deviations from this one condition met in practice.

The Cold Snare.—This instrument is also apt to leave much of the tonsil, especially the worst part, the velar lobe of Casselberry, in the throat, and the constricting wire not only creates a torn and bruised wound surface but, unless the tonsil be nearly dissected from its bed as a preliminary, it is apt to draw portions of the pillars and palate into the contracting loop and inflict ragged wounds in them. Inflammatory reaction lasting for a number of days, sloughs filling the tonsillar fossa, fever and foul breath have in my experience often followed the use of the cold snare, for the wire loop is a poor cutting implement and the torn wounds it creates have the usual tendency to infection and inflammation characteristic of tissues devitalized by blunt force. I know of an instance in which snare tonsillotomy done by a skilful colleague resulted in throat gangrene and death from ulcerative endocarditis.

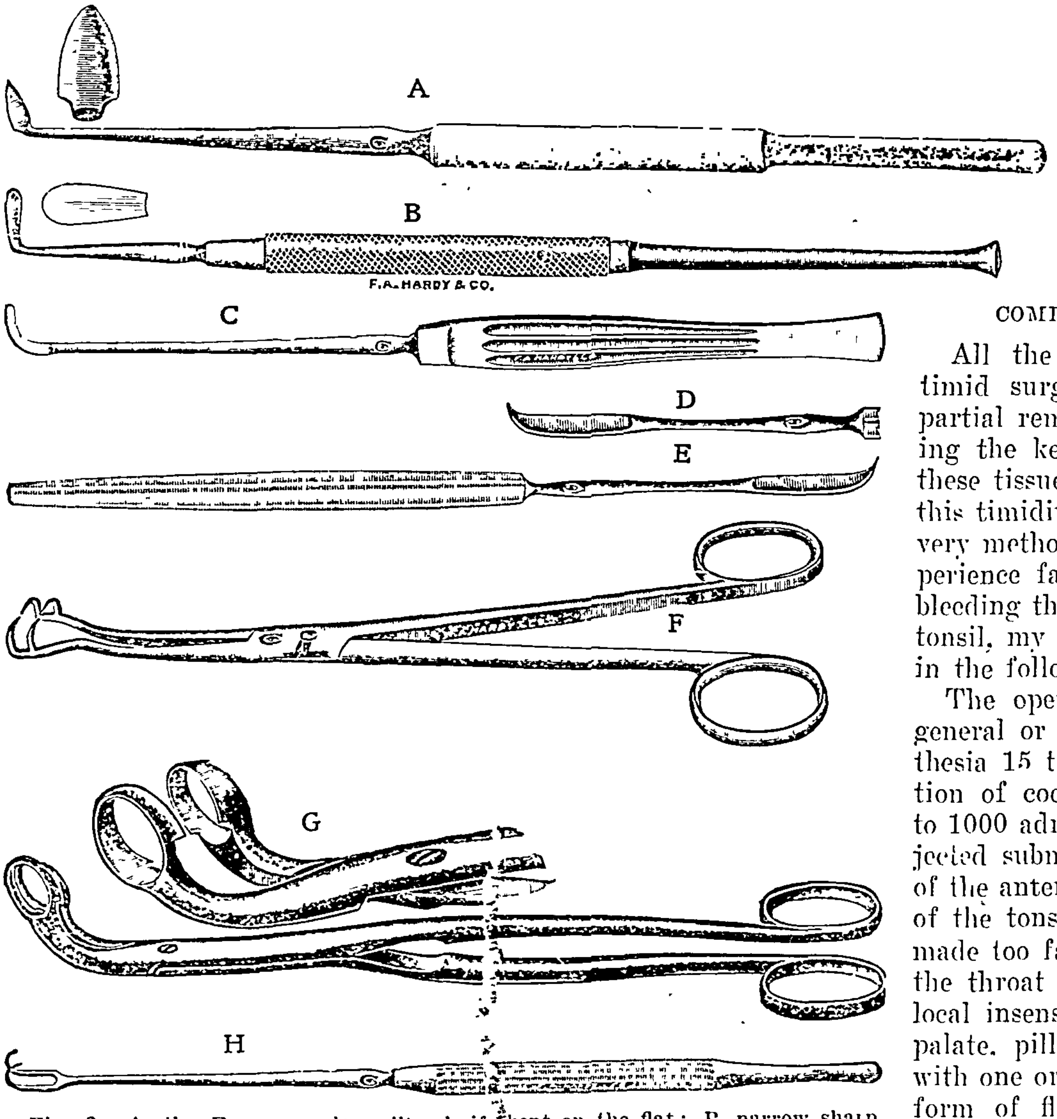

Fig. 6.—A, the Freer angular pillar knife bent on the flat; B, narrow sharp pillar-separator; C, Tydings' sickle-shaped tonsil knife; D, E, the Freer Tonsil knives with blades curved on the flat; F, Casselberry's tonsil-forceps; G, Rhodes' tonsil-punch; H, double tenaculum.

The Cautery Snare.—The cautery snare does not draw in and tear the tissues as does the cold snare, but leads to a good deal of inflammation and fever. It is but little employed now.

Cautery Dissection.—This permits complete removal of the tonsil, but is apt to be followed by secondary hemorrhage, hard to suppress; the inflammatory reaction is greater than when a knife is used, and it is difficult to dissect accurately with this clumsy implement, so that the pillars are apt to be injured by it.

Cauterizing Follicles.—Attempts are often made to prevent the peritonsillar abscesses resulting from the cicatricial tonsil by slitting, or merely burning, its follicles with the cautery point in the hope of obliterating them, a process as tedious as it is unsatisfactory, for it is impossible to follow all of the crypts to the bottom; many do not close after being burned, and hidden ones are not reached at all, so that the failure of the treatment is often announced by a new abscess. The contracting cicatrices left after the cautery may aggravate the pain and dysphagia caused by a cicatricial tonsil.

COMPLETE EXCISION OF TONSILS

All the procedures mentioned represent timid surgery which is satisfied with the partial removal of diseased tissues, or, fearing the keen blade, burns and tears where these tissues should be cut. The reason for this timidity is the fear of bleeding, but the very methods it has suggested are in my experience far more apt to lead to prolonged bleeding than a neat surgical excision of the tonsil, my conception of which is embodied in the following description:

The operation may be performed under general or local anesthesia. For local anesthesia 15 to 30 drops of a 1 per cent. solution of cocain, to which a few drops of 1 to 1000 adrenalin solution are added, are injected submucously through the outer limit of the anterior pillar just outside of the base of the tonsil (Fig. 5). If the puncture be made too far inward the fluid will leak into the throat through the tonsillar crypts and local insensibility will not result. The soft palate, pillars and tonsils are next rubbed with one or two grains of pure cocain in the form of flake crystals in order to limit retching. In about five minutes after this the operation may begin and is conducted with the patient sitting upright before the operator or else reclining on an operating chair or table. The adrenalin insures a nearly bloodless field.

Where general anesthesia is employed the patient is placed in the lateral position of Ingals, lying on his side with the arm underneath drawn out behind his back so that he rests partly on his chest at the very edge of the table, his head lying on the cheek and being held strongly backward by an attendant. In this position the blood runs out of the mouth and does not enter the air passages. For excision of the right tonsil the patient lies on his left side and conversely the uppermost tonsil being the one cut out, so that the blood will flow downward out of the way of a view of the operative field. I have not combined adrenalin injection with the general anesthesia, as collapse conditions have been attributed to its use under these conditions.

The table on which the operation is performed should be high, from forty to forty-eight inches, according to the stature of the operator, so that he can sit at ease during the operation. He must kneel, when a common table is used, in order to look into the patient's mouth.

For the illumination I use a Jansen electric head-lamp having a miniature light in a small cylinder with a condensing lens. The broad, bell-shaped head-lamps used by the general surgeon are unsuitable, as they leave the operative field in shadow, their rays being emitted at too great an angle to the axis of the eye to shine deeply into the throat.

The instruments used for the operation are a Kirstein tongue depressor; two dozen long swabholders; a gag, Allingham's preferred, used where the operation is done under general anesthesia; the Freer angular pillar knife and sharp narrow pillar separator (Figs. 6, A and B), the latter for small throats and little tonsils; a sickle-shaped knife bent on edge (Tydings) and having a sharp, not a probe, point (Fig. 6, C); the Freer tonsil knives for excision of the tonsil, with blades curved on the flat (Fig. 6, D and E); a Casselberry forceps for seizing the tonsil (Fig. 6, F); a Rhodes punch forceps (Fig. 6, G); two long slender double tenacula for holding the pillars apart where small tonsils are excised (Fig. 6, H).

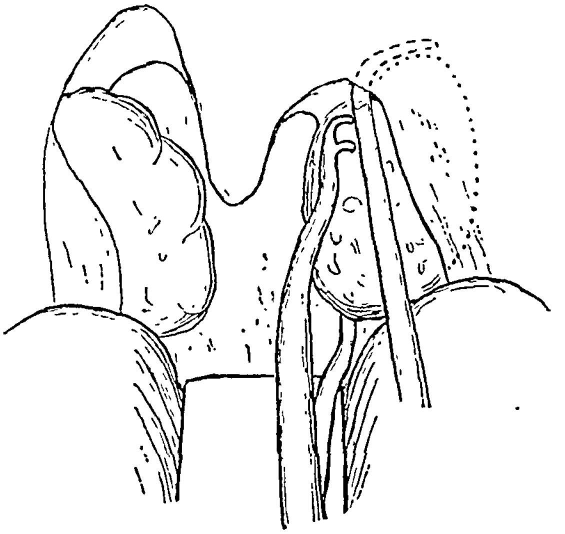

Fig. 7.—The tonsil is seized with Casselberry's forceps and pulled downward while the velar lobe, indicated by a dotted line, is dissected out with the Tydings' knife.

The first step of the operation is the dissection of the plica triangularis and anterior pillar from the tonsil, the sharp-pointed blade of the pillar knife cutting up and down underneath them until it has freed them entirely (Fig. 5). The pillar knife must be very sharp, as the tissues to be cut are often tough. The posterior pillar is then dissected from the posterior surface of the tonsil with the same knife or, if tonsils are very large, one with a longer blade, not shown in the cut. So far the tonsil has not been pulled from its bed with forceps, for drawing out the tonsil during the freeing of the pillars distorts the natural relation of the parts and makes the dissection liable to cut into the walls of the tonsillar fossa.

The next step is the dissection of the velar lobe out of its bed in the soft palate. This is accomplished by pulling the tonsil strongly inward and downward with the Casselberry forceps until the velar lobe becomes visible, when it can be severed by the sickle-shaped knife of Tydings from its attachment to the palate above (Fig. 7).

The preliminary dissection is now complete and the tonsil prepared for removal. So far the operator has held the tongue depressor. He now hands it to an assistant, and grasping the tonsil deeply at its upper and lower poles with the Casselberry forceps pulls it inward and downward as far as it will go (Fig. 8). As it has been freed from the pillars and palate by the dissection described it can usually be readily drawn out beyond its base and made to project in its entirety beyond the plane of the pillars. As the deeper tissues of the neck lying in the pharyngomaxillary fossa outside of the dense fascia of the superior constrictor muscle do not follow the pull upon the tonsil it becomes removed by the traction far inward from the danger of wounding larger vessels in its excision. While the tonsil is thus held drawn out of the tonsillar fossa the one of my two tonsil knives, bent on the flat, which curves away from the side of the throat when its edge looks toward the base of the tongue, is inserted above the tonsil and made to cut downward behind its base until the tonsil is severed completely from its bed (Fig. 8). When general anesthesia is used free bleeding follows for a few seconds, but it may always be controlled by placing the index finger in the wound and making pressure. After the removal of the tonsils under cocain and adrenalin there is little or no bleeding.

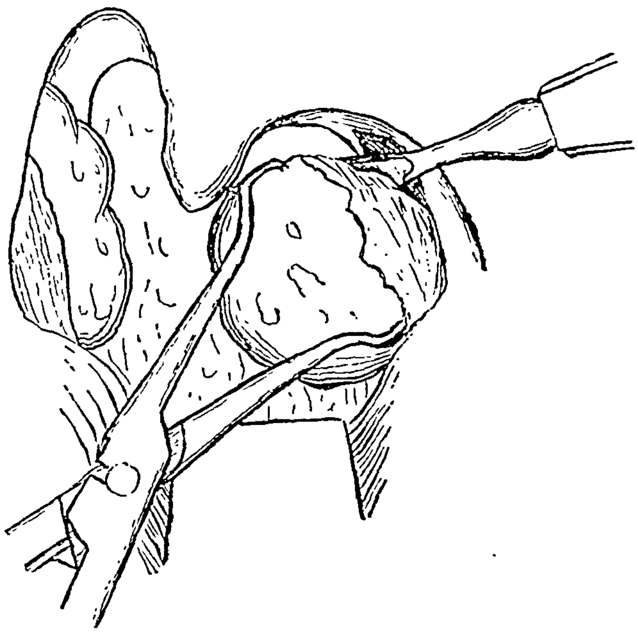

Fig. 8.—The tonsil is strongly drawn downward and inward while the curved Freer tonsil-knife cuts it out under its base.

The reason for the use of the blades curved on the flat instead of straight ones, for the final excision of the tonsil, is the tendency of the point of a straight blade to cut into and buttonhole the posterior pillar, while that of a curved one trends away from it. Probe-pointed knives cut badly.

When the operation is done under general anesthesia it is occasionally necessary to remove, with the Rhodes punch, fragments which were left by the knife. When local anesthesia is employed, however, the excision is usually so exact and complete that this auxiliary is not needed.

The excision of the small, cicatricial tonsil, after it has been circumcised, is often difficult, and in some instances in which it has degenerated into a ragged warty remnant hidden under the pillars, its flat, friable fissured substance gives no hold to the teeth of the forceps so that they tear out and can not draw the tonsil out. In such cases the pillars must be widely spread with double tenacula by the assistant while the patient half reclines on an operating chair. All the tonsil thus becomes visible and may be cut away piecemeal, including the velar lobe, with the Rhodes punch forceps and the Hartmann-Grünwald nasal punch for smaller pieces. In the great majority of cases, however, the cicatricial tonsil can also be cleanly excised from its bed with the knives as described.

When the tonsil excision is finished the tonsillar fossa appears as a deep hollow, showing the direction of its muscular fibers, and no vestige of the tonsil is visible in it. All of the mucous membrane of the palate and pillars, including the delicate fold of the plica triangularis, remains intact and the smooth wound surfaces left by the knives heal rapidly. After a week nothing of the deep hollow, seen right after the operation in the place of the tonsil, appears, the pillars coming together and collapsing into the fossa, so that no trace of the operation remains except absence of the tonsils.

In ordinary cases the time needed for the operation does not exceed five to ten minutes for each tonsil, but a longer time is required for cicatricial tonsils. The knives must be kept very sharp, for blunt instruments are not suited for dissection, and a case has just come to my knowledge in which a good operator tore through the anterior pillar with a dulled separator and his finger in "enucleating" a tonsil by blunt force, a method of operating involving objectionable violence.

SUMMARY

The most satisfactory and perfect method for the removal of all varieties of diseased tonsils is their dissection from the tonsillar fossa with knives of suitable form.

Tonsillotomy with the tonsillotome or snare, cautery dissection and the attempt to cause shrinkage of the tonsil by galvanocaustic slitting of the crypts are timid and unreliable methods which should be abandoned.

There is less danger of prolonged hemorrhage from the rational excision of the tonsil which I have described in this paper than from the usual methods of its removal.

Not only tonsils which act as obstacles in the throat because of their size, but all varieties of chronically diseased tonsils should be completely dissected out.

34 Washington Street.

Infantile Paralysis.—E. H. Bradford and R. Soutter, in the *American Journal of Orthopedic Surgery*, state that the objections to arthrodesis in this condition are that it necessitates a mutilation and loss of function, and that in young children in whom the ends of the bones to be united are largely cartilaginous, it involves a considerable destruction of tissue without preventing, through the late growth of the limb, a recurrence of the deformity. Arthrodesis, however, finds its place in cases of flail joint in which all muscles are paralyzed, and when successful enables the patient to dispense with apparatus.

HEREDITARY HYPOPLASIA IN MAN, DUE TO DEGENERACY

THE UNDERLYING BASIS OF THOSE CASES HAVING A HEREDITARY ORIGIN, AND THE RELATION OF THIS UNDERLYING CAUSE TO THE FUNCTIONAL NEUROSES, TUBERCULOSIS, INFECTIONS AND IMMUNITY *

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It is my desire to bring before the profession what I believe to be the primary cause of many groups of morbid conditions heretofore considered as being separate, or as having a very loose relation one with the other.

It is known that the impregnated ovum has within it potentially the whole man or the whole woman; that is, body, mind and spirit. It has within it potentially all that constitutes temperament in the adult and also that which is spoken of as heredity as distinguished from environment, which last, however, as a directing force is largely made up of the heredity of the mother.

In order to lend directness and lucidity to this presentation of the subject, I will state here that the factor, or underlying cause, of the various morbid conditions which will be considered later is the degeneracy of the particular line of life active through the person of either the father or the mother, or through both, conveyed by the spermatozoon, or by the ovum, whereby the impregnated ovum, potentially the new individual, fails to receive from his progenitors that as yet unexplained something which brings it about that this unicellular organism shall in due time become evolved into a normal human being.

When the defect in the ovum is very great in degree the resulting individual is very abnormal. Without stating it as a fact, I will suggest that this is the explanation of certain abortions and of certain monsters under the so-called congenital abnormalities of structure, while others doubtless are due to the environment of the ovum while yet in the womb of the mother.

This is the explanation of idiocy, imbecility and dulness of intellect in the group of cases not caused by accidental influences acting through the mother during pregnancy.

It is the explanation of what happens when a subnormal child goes to school. He either has a fairly good body with a dull intelligence (the microcephalic type), so that he does not learn his lessons so easily as his fellows; or, on the other hand, he is unusually bright, but has not the physique to withstand the pressure even of childlife, and so that it is said the child is all brain, but has a very poor body. Between these types are those of the so-called nervous children—that is, those who have an unstable nervous system.

When the subnormal girl reaches puberty, those changes which convert the girl into a maiden fail to take place at or about the eleventh year. At this period the neck of the normal girl loses its flatness, such as a boy has, and it is no longer possible to see the sternocleido-mastoid muscles. This is due largely to the development, physiologic hypertrophy, or evolution, of the thyroid gland, aided somewhat by the increase in the thickness of the adipose tissue of the neck. The subnormal girl retains the body form of the child, wherein girl and boy are very much alike in their figures. The bones fail to develop, the hips fail to broaden, and the limbs, the body and the face do not attain the rotundity which characterizes the woman as distinguished from the man. The breasts do not develop, and in extreme cases the pubic hair is late in growing. In other words, as it is stated, puberty is delayed. The body retains the form of a neuter—that is, of a child. The pelvic organs do not develop, the vagina remains more like that of a girl, and so do the uterus, Fallopian tubes and the ovaries. It is equally true of the ligaments of the womb. This failure in development may be complete or may be partial, and the least manifestation of it is the so-called pinhole os of Marion Sims, associated, as it is, with narrowness and anteflexion of the cervix. Puberty in the subnormal arrives, when it does arrive, not at 13 in this latitude, but at from 14 to 20, depending on the original defect in the ovum, aided, it may be, in particular cases, by the environment of the child after its birth. Likewise, it will be found in each of the groups of cases that the condition may, as it is said, be acquired, rather than due to the causes of which we are treating. That is, it may be due to the diseases of a nutritional character, to the influence of acute disease, such as typhoid fever, or to some accident profoundly influencing the nervous system. Heretofore it has been said that these conditions are either congenital or acquired.

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* Read before the Southern Surgical and Gynecological Society, St. Louis, Dec. 16, 1908.

After marriage such subnormal girls are relatively sterile. Some do not become pregnant; they torment their husbands and worry their doctors, and then comes nervous prostration from worrying over the situation. Others become pregnant, and the womb is imperfectly developed, resulting either in abortions, in abnormal labors, or in lacerations; many of these women have puerperal infection. Then comes nervous prostration from having had this experience. Such women are mentally unstable and everybody says they are peculiar. They are not like other women; that is, they have hypoplasia of their entire bodies. It is not merely arrested development of the pelvic organs, but arrested development of the body in general. Their bones and their muscles, their hearts and their arteries, and, most of all, their nervous system—central, spinal nerves and sympathetic—are imperfectly developed; that is, organs and parts are in a state of hypoplasia, or arrested evolution.

Such women very often have retrodisplacements, when they do not have anteflexion, and all have poor ligaments; round ligaments and uterosacrals, and the broad ligaments, and the Fallopian tubes, and the ovaries likewise are imperfectly developed—are in a state of hypoplasia.

Many of these women have, at about the age of 11, what is called chlorosis, which is a part of this general situation—it belongs in this group. Even Virchow missed the point. He recognized the fact, but did not see the explanation. He said that chlorosis was incurable, because dependent on hypoplasia of the heart; whereas the truth is that hypoplasia of the heart is a mere incident in the general situation. Heretofore it has been said that puberty is arrested because of malnutrition resulting from chlorosis, whereas the truth is that the two have the same primary cause.

It was stated that many of these women have puerperal sepsis. This is mentioned here separately, but will be taken up later in connection with other infections.

This principle explains all the cases of displacement of the uterus not due to accidental causes acting on normal individuals.

Now comes the loose kidney, the so-called nephroptosis. It has been known that such patients usually are queer, that they have many nervous symptoms. Men who are routinists and who have operated on these patients indiscriminately have found that many of them are no better after nephropexy. Others who were more studious and thoughtful, who have taken the trouble to differentiate the cases into groups, those having direct local symptoms, those having reflex symptoms, those having hysteria, and those having nervous prostration, have found that nephropexy cured the patients in the group having local symptoms and the group having reflexes, and so they have restricted their operations to these two groups and have advised that the patients in the other two groups, namely, the hysterics and the neurasthenics, shall not be operated on; or, if operated on, that these nervous disorders shall receive appropriate treatment. The explanation is that the two groups, those having direct and those having reflex symptoms, are instances of acquired nephroptosis in persons of normal development, almost without exception; whereas the other groups are chiefly made up of the patients primarily defective. Hence the mechanical cure of the local condition cured the symptoms in two groups and could not alter the primary basis of the trouble in the other two groups. In practice this will be somewhat mixed, as the groups will overlap each other. Some patients primarily defective will have local symptoms, and operation will relieve the local symptoms, and some patients having acquired nephroptosis as the result of malnutrition due usually to acute disease, less often to long-acting causes, and rarely to traumatism, will develop neurasthenia; hence operation in these cases will cure only the local or reflex symptoms, even in patients primarily normal, and will not influence for good, or will make worse, those having hypoplasia from arrested development.

My work as a gynecologist has brought me in relation more particularly with hysteria, neurasthenia and reflex neuroses. It is probable that such conditions as epilepsy, catalepsy, hysteria, insanity, exophthalmic goiter, etc., have the same basis in degeneracy as those conditions already considered.

As showing the relation between the two groups of cases already studied, it was two gynecologists, Edebohls and myself, who worked out these facts. It has long been observed—and this idea was especially elaborated by Harris—that those having loose kidneys have a peculiar body form; this body form is the same as that which has been discussed in connection with delayed puberty and is due to general hypoplasia. It is the form of the child—the neuter. Harris failed to recognize the underlying cause of this body form. Glenard long ago recognized that dropped stomach and dropped intestines were associated in certain cases with dropped kidneys, and as a result of his teachings, which represent a half-truth, there came confusion in the study of nephroptosis, because the underlying cause of each was not understood. His teaching failed to take into consideration the fact that certai [illegible] are d[illegible]opmental in origin and that others [illegible] ired [illegible] the confusion.

This group of visceral ptoses, which includes stomach and intestines, the kidneys and the liver and the spleen and the uterus, when not acquired, are all due to developmental causes—to a primary defect in the ovum. But this is not all, because they have general hypoplasia; the liver cells and the cells of the gastric and of the intestinal glands and of the pancreas all feel the influence of the primary defect in the ovum. In addition, the nervous system suffers the consequences of this primary defect, and so we have so-called nervous indigestion, which is merely the outcome of general hypoplasia, when it is not reflex in origin. It has been known for centuries that the consumptive has a peculiar body form, speaking broadly; he or she is not erect; there is a general appearance of lassitude and languor, due to lack of tone and to poor nutrition of the ligaments and of the muscles and of the fasciæ of the body. The form of the vertebral column is altered, its curves are changed. This change lessens the capacity of the chest and alters the configuration of the abdominal cavity. To speak first of the abdominal cavity: This change in form alters the direction in which intra-abdominal pressure exerts its force. Added to this is the lack of tone in the muscles of the abdomen, and these two factors, acting in concert on the viscera of the abdomen and pelvis, with their suspensory ligaments and the other structures which directly support them, themselves feel the influence of the primary defect in the ovum and so have lax tissues, which yield insufficient support—bring about visceral ptosis. The result in the chest is that, owing to the abnormal configuration of the bones, there is less room for the lungs, and, owing to the hypoplasia of the ribs and of the muscles of respiration and of the nerves and nerve centers which control respiration, there is defective respiration. These factors, together with the hypoplasia of the lung tissues, make this group peculiarly susceptible to the invasion of the *Bacillus tuberculosis;* and so it has long been recognized that such people—that is, those having such a configuration of their bodies—are liable to this disease—consumption, or tuberculosis.

It is noted above that the women belonging to this group are peculiarly liable to the development of puerperal infection. I have long observed that these women are especially liable; also that those on whom I have operated for dropped kidney, and the nervous group of which we have been speaking, have been especially liable to develop infection of the urinary tract from catheterization following operations. Now we see that the same group, as has been known for years, are peculiarly liable to develop consumption. What is the explanation? We must go back to the primary defect in the ovum which results in what was formerly called low tissue resistance to infection, or, as it is now stated, a low opsonic index; that is to say, that unknown something, in the blood plasma, which enables the individual through the action of the so-called opsonins to lessen the virulence of the infecting organism. Is not this, in part, the explanation of the nature of infections, of the nature of the loss of relative immunity, of the fact that some are susceptible to the actions of infectious organisms and succumb, and that others who are normal, or who are more normal than those just mentioned, are able through their opsonins to overcome the infecting organisms and thus to recover?

It was first noted by Edebohls that appendicitis of the chronic type, especially, is very common in association with loose kidney. He attributed it to the mechanical influence of the dropped kidney on the vessels of the appendix. His observation was correct, but is not his explanation erroneous? Is not the true explanation the same as that of all of the other groups?

It has long been known that those belonging to the groups discussed are queer people. Their minds are unstable and do not work like others. They do not think soundly or reason accurately, as a rule, and their judgment is apt to be bad. In other words, intellectually they are defective. Likewise the moral perversions belong peculiarly to this group. Thus in this group also are the hysterics, etc., and they are all prone to develop neurasthenia. What does this mean? Hypoplasia of the nervous system due to a primary defect in the ovum. Does not this make the whole subject simple and easy to be understood?

Now, just as with the displacements of the uterus and with the displacements of the kidney, so it is with the chest cases, and with the nervous cases; we can have acquired troubles due to the environment of the individual who is normal, or who is only slightly defective, and the two groups, the cases primarily due to heredity and those primarily due to environment, can be differentiated. In practice the prognosis in one group is good and in the other group must be guarded, is less good, or is bad. The line of treatment must be different in each group. In the acquired cases all that is necessary is to remove the cause and to remove or to cure the particular trouble by therapeutics, medical or surgical, and then the previously normal individual becomes well. In the other group, the cases due to hypoplasia, if in the case of an adult, the cause can not be removed. It lies back in the ancestors who can not be reached. So here we must get at the fringes of the question instead of at its center, fundamentally. We can cure by therapeutics, medical, hygienic or surgical, the secondary results of this primary defect; then along the lines of nutrition, and along the lines of hygienic living, we can improve the condition of the individual until he is well enough to say that he is well again. But that individual can never do a full man's or a full woman's work. When the strains and stresses of life come on him, or her, comes the breakdown and nervous prostration.

And this is not all. This explains what we hear so much about, namely, the inadequate results attained by certain specialists, the kind who are mere routinists, who are superficial men—in other words, who are not experts—those who have not only a narrow field, but also have a shallow education, and who have selected a specialty, not that they may get at the root of the questions which come before them for solution, but in order that they may have an easy time, and not be bothered with too many problems, and so have not gone to the foundations of medicine, which are as broad as natural and physical and mental science, which is necessary for the expert, who is a true specialist. So when cases belonging to this general group (in which are represented many functional conditions or neuroses, involving particular specialties) come to these superficial or false specialists, the treatment takes the form of the useless spectacles, the nose-washes and the blowing of air through the respiratory passages, the silly use of tampons as a routine, or the painting of the os with iodin, or the mere routine employment of the rest-cure without understanding, and the use of electricity for the titillation of the nervous system—the playing on the mind by causing the vibrator to touch the body, or what is called by such men "psychologic therapeutics," practiced by sending sparks through the patient from Leyden jars. Such men have brought specialism into disrepute among the unthinking, who have failed to recognize that such men are not specialists—that is, experts—but narrow men, with a shallow education, who neither know, nor can see, the truth, when it comes before them; and so it comes that all this routine practice, based on ignorance and incompetence, not only does no good, but wastes the patient's money and brings medicine into disrepute. The truth is that in the diseases belonging to each specialty the same factors are at work, and the explanation of the failure to get good results is that doctors have not separated the cases developmental in origin, due to a defect, primary in the ovum, from those cases in which the disease is acquired, in a normal or relatively normal individual; or, to use the usual terms, they have confused direct and reflex symptoms with hysteria, nervousness and neurasthenia.

This subject (degeneration or hypoplasia) has long occupied my mind, and already twenty years ago I recognized the truth of it so far as it applies to the cure of women having delayed puberty. I appreciated *the truth that this was developmental in origin* (arrested evolution) and must be treated along nutritional and hygienic lines; but the word congenital was confusing, because one's mind was arrested in its processes at the period of birth and did not go back to the beginning, to the ancestors, and to the influences of heredity on the fertilized ovum—one's reason was lost in the fog or mystery of the creation of a new being.

I was greatly aided in the solution of the problem as applied to this group by the late Harrison Allen, the last—more's the pity—of what may be called the naturalist school of physicians. He was really a great scientist, although he was known as a rhinologist, the one who laid the foundations of the modern surgery of the nose and throat; but he had the broadest of training. He was a great craniologist, one of the most learned in this field in the world. He had been a general surgeon and had given it up because the field was not inviting to a man of his type of mind. The field was too broad and, therefore, the tendency was to make its practitioners shallow. The human mind is not great enough to go to the bottom of many things; so in time Allen, having a philosophical mind, appreciated the great truth, that a stream of given volume must be narrow if it is to become deep. And so after laying the foundations of his career very broadly, he restricted his activities within a reasonable compass.

I was puzzled, as a young gynecologist, by the condition known as "delayed puberty." I saw many cases of it in my dispensary work, where, naturally, the decadent are numerous. I recognized that such patients were peculiar people, not like others; also, that I had not been able to do much for them. I talked with Dr. Allen and he told me that he thought that it would be of interest if I should refer to him a number of such patients to study from the standpoint of a student of natural science. I did so, and he reported his findings in about twenty of them. The report was that their osseous systems were undeveloped, their frames as much like men as like women—that is, they were neuters—that their crania were undeveloped, that they had high-arched palates, that their vocal chords were ill developed, and that such people could not be singers. He also recognized the fact that their nervous system was ill developed, but he stopped with birth and called the condition congenital. But it is evident that the only way to do anything with these people, practically, is along the lines of nutrition and hygiene, and so for twenty years I have treated this group, and then the dropped kidney group, along these lines. The word "congenital" was the stumbling-block. Dr. Allen and I each recognized that the trouble was developmental, and a hypoplasia, but we thought that the trouble was primary in the nervous system and exerted its influence through the trophic nerves, those controlling nutrition, resulting in malnutrition and arrested development.

I have long noticed that in this group of women it is very common to have leucorrhea, and have taught that this, when the discharge is thin in character, comes *from the endometrium, and is due to malnutrition* and not due to local disease. I failed, however, to appreciate what I believe is the fact, namely, that this is just the same condition as that previously discussed, that it is due to a hypoplasia of the cells of the endometrium so that they fail to functionate normally and are subject to degenerative changes in structure. Is it not the underlying cause of so-called glandular hypertrophy of the endometrium, and is not this the same pathologic *condition found in the throat and called adenoids* and diseased tonsils, and does not this theory explain this group of debilitated women, and also all the children who are not vigorous, and who get adenoids and diseased tonsils and become mouth-breathers?

Now how are we to differentiate the defective children, those in whom puberty is delayed, those with visceral ptoses, with consumption, with neuroses of hereditary developmental origin, from those in whom it is *acquired? By eliciting the family history* and by looking for the stigmata of degeneracy, particularly, because this is the easiest, for the high-arched palate of the degenerate. All the other stigmata of degeneracy are as significant, but they are less easily recognized.

It has been only recently that the truth which lies behind all these isolated facts, so long known by many, came to me through the correlation of these isolated truths, whereby one obtained the premises, the proper point of view, from which to see the truths above noted, and on which to reason, and then the conclusion became inevitable that the real basic nature of all these apparently separate groups of morbid conditions lies in the defective ovum due to heredity and to the degeneracy. Now here lies the explanation of that ancient proverb, that the sins of the father are visited on the children *to the third and fourth generation* — not because the Almighty is revengeful, but because this is Nature's law and is, therefore, inevitable.

1509 Locust Street.

Tuberculin Reaction in Eye Diseases.—P. A. Callan (*New York Eye and Ear Infirmary Reports,* July, 1908, xiii, 18) calls attention to subnormal temperature within a few hours after injection of tuberculin. The reduction varied from 1 to 2 degrees F.; and was quickly followed by a rapid rise culminating at the maximum within twelve hours. Some patients suffered a great deal from the effects of tuberculin. Not unfrequently they complained of a chilly feeling, severe headaches, nausea with pains in various parts of the system; and generally immediately most of them complained of a feeling of malaise and general discomfort. While the doses of Koch's tuberculin given for diagnostic purpose were not large, he reports two patients who, in his opinion, were made worse by them. This subnormal temperature might be more frequently discovered if the temperature were taken within one hour after the injection.

Clinical Notes

PROPHYLACTIC EFFECT OF ANTITOXIN ON THE CHILD IN UTERO

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Two years ago I was called to treat a child supposed to be suffering with tonsillitis. I found the child with an unmistakable diphtheritic membrane in its throat. A second child also complained of sore throat and was found to have a membrane on the uvula. The mother, who expected to give birth to another child in a few days, also had a membrane in the throat. The diagnoses were all confirmed microscopically later. The first child had a severe attack and three weeks later died from *nephritis. The second child and the mother were not* severely ill, as I injected antitoxin at once in all cases and their illness had been of but twenty-four hours duration at the time of the injection.

I administered 4,000 units to the mother, followed in twelve hours by 3,000 more. Ten hours after the mother received the second injection the child was born, under anything but ideal conditions. I allowed the child to remain with its mother and to take the breast. The mother had fever and the membrane remained in her throat for about three days after delivery, but the child was perfectly healthy and never developed a membrane nor was there any appearance of sore throat.

I have never seen a report of a similar case, but suppose that the child must have obtained a prophylactic dose of the antitoxin through its mother's blood.

AN IMPROVED TONSIL SNARE

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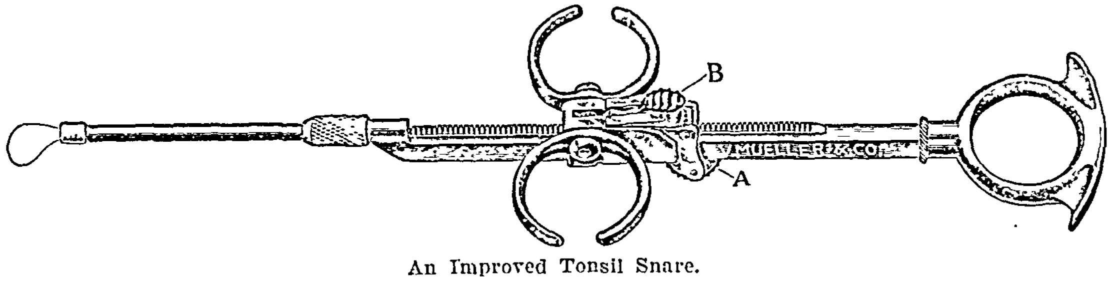
The value of a tonsil snare depends on several qualities. First, it should carry a loop large enough to pass over the handles of the tonsil-seizing forceps of ordinary size. Second, one should be able to tighten the loop quickly to any desired extent with the use of one hand. Third, one should be able to employ a slow and powerful tension at any moment without the aid of the second hand.



An Improved Tonsil Snare.

From designs which I furnished some time since, a snare has been perfected which embodies these qualities without being too complicated. The wire is threaded through a stylet which has a ratchet on one side. The loop can be tightened by pulling on the rings as with the common pattern of snare, or it may be tightened by revolving the rings (there being a cogwheel on the bar which joins the two rings that acts on the ratchet). The friction clutch A holds the carriage firmly while the ratchet is being used. The loop can be enlarged or released at any time by simply pushing the friction clutch A forward or by releasing the catch B and reversing the direction of the rings, which pushes the ratchet stylet forward in the canula. This permits the same loop to be used repeatedly. The instrument is made of steel, is light and strong, and will bear the closest scrutiny as to workmanship.

TYPHOID SPINE *

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In 1889 Gibney[1] of New York described a condition of the spine following enteric fever, of which he had 4 cases, to which the term typhoid spine was applied. From that time until 1902 Lord[2] found that 26 cases had been reported, and in 1905 Fluss[3] noted 42 cases of the same condition. Silver[4] in 1907 reported a case and also reviewed the literature on the subject to that date, collecting in all 67 cases. Since then 2 cases have been reported by Myers,[5] 1 by Peltesohn[6] and 2 by LeBreton.[7] An early case by Schmitz,[8] which was overlooked in previous reviews, with the following case brings the total to 74.

Patient.—A lad of sixteen suffered from a mild attack of enteric fever which confined him to bed a little over four weeks. The most prominent feature of the condition was the profuse and protracted eruption of rose spots on the chest, front and back, abdomen, arms and legs. They appeared about the eighth day of the disease and persisted until the latter part of the third week. Convalescence was rapid, and he was able to return to his work in a short time.

Development of Complication.—About six weeks after being up from the attack of typhoid fever there suddenly developed severe pain in the lumbar region. This came on after a hard ride on a bicycle. Though suffering constantly, he pursued his ordinary duties for about two weeks but was then forced to give up and take to his bed, where he remained for a week.

The pain at this time was located mostly in the lumbar region, where, on pressure over the body of the second lumbar vertebra, it became excruciating. It was referred in a lesser degree to the right side and downward toward the crest of the ilium, also to a still less degree to the left side in the same position. Pressure in these regions elicited some tenderness which seemed to be localized, while if pressure was exerted on the lateral aspects of the iliac crests no pain could be produced in the sacroiliac symphysis; no tenderness was present in the last named region. The patient also complained of a pain which encircled his body like a belt at the waist line. There was a slight degree of anesthesia on the right side below the anterior superior spine of the ilium, which extended downward to the symphysis of the pubes. There was no deformity of the spine, nor has any occurred since. Swelling and redness were both absent during the entire attack of the spinal condition, although his temperature ran between 101 and 102 degrees.

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* Read before the Philadelphia County Medical Society, Oct. 28, 1908.

[1] Gibney, V. P.: Tr. Am. Orthop. Assn., 1889, ii, 19.

[2] Lord, Frederick T.: Boston Med. and Surg. Jour., June 26, 1902, p. 689.

[3] Fluss, Karl: Centralbl. f. d. Grengeb. d. Med. u. Chir., viii, 645, 730, 817.

[4] Silver, David: Am. Jour. Orthop. Surg., October, 1907, p. 194.

[5] Meyers, T. Halsted: Am. Jour. Orthop. Surg., October, 1907, p. 180.

[6] Peltesohn, S.: Ztschr. f. Orthop. Chir., xix, 239.

[7] LeBreton, Prescott: Two Cases of Typhoid Spine, The Journal A. M. A., Nov. 2, 1907, xlix, 1529.

[8] St. Petersburg med. Wchnschr., 1901, p. 254.

The pain was exceedingly severe, even when the spine was in the most comfortable position, and rendered the patient quite helpless. Even after getting up from the above acute condition he was unable to dress or undress, as any movement of the spine either forward or laterally caused him to scream from pain. Almost immediate relief could be obtained by allowing the patient to support himself with his hands on the back of a chair, his legs being flexed and the toes lightly touching the floor. The pain could also be relieved to a great extent by an exaggerated erect posture, thus removing the superincumbent weight from the bodies of the vertebræ and placing it on the posterior portions of the spinal column.

Treatment.—The use of opium and at times the above described positions relieved the pain to a considerable degree, but for permanent results fixation of the spine by mechanical means was advised. Dr. Rugh was asked to see the case, concurred in the diagnosis, and applied a plaster jacket while the patient was extended to full length by means of a tackle and pulley arrangement, the feet of the patient being allowed to touch the floor sufficiently to maintain steadiness and to bear a slight part of the body weight.

Course of Disease.—Two days after the cast had been applied the patient weighed 119 pounds, and in about a week he had gained five pounds. The pained expression on his face disappeared, the appetite improved, and sleep became more restful. There was no pain except when the patient inadvertently jarred himself, as by stepping down heavily or seating himself suddenly. The cast was worn constantly for about eight weeks, and then continued for a couple of weeks longer as a corset, being applied in the morning and retained in place by means of tapes passing entirely around the chest, and removed on retiring.

He made a complete recovery, there being no recurrences of pain, and when seen a year later he was in perfect health, his weight being 153 pounds.

Neither during his illness nor since have any nervous symptoms been observed; nor have any special nervous conditions been noted in other members of the family.

2025 Chestnut Street.

DERMATITIS VENENATA DUE TO A PROPRIETARY HAIR-DYE

ALFRED SCHALEK, M.D.
OMAHA

I was called to see Mrs. E. W., November 4. For a week she had been treated for supposed erysipelas of the face, without benefit. The patient had a rapid pulse but normal temperature, the scalp and the face were much inflamed, of a dusky red, edematous, with a few scattered bullæ. The eyelids were swollen and closed, the eyes injected, smarting and extremely sensitive to light. The patient complained of a burning sensation (but *no pain*) and of general restlessness which had prevented her from sleeping during the last three nights. Applications of mud poultices and some other dark, sticky, ill-smelling "patent medicines" had succeeded in matting her hair into a felt-like mass and in making her decidedly worse. I diagnosed the case as dermatitis venenata, but was unable to discover the cause at that time. Under appropriate treatment the patient recovered quickly and on November 11, I discharged her cured. November 21, I received another urgent call to see her and found her in the same condition as the first time. Close questioning elucidated the fact that on the previous day she had dyed her hair with "Mrs. Potter's Pure Walnut-Juice Hair-Dye, warranted not to contain lead, silver, opium, etc.," and shortly afterward felt a burning sensation in her scalp, which was followed in a few hours by her present condition. She also acknowledged that her former similar experience followed closely on her first trial of the dye.

A MODIFIED METHOD FOR THE SUBCUTANEOUS USE OF ARSENIC

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NEW YORK

The hypodermic use of arsenic has long ago established itself as one of the best methods of administering this drug. The subcutaneous use of this medicament is preferable in all diseases in which a long-continued arsenic medication is indicated, particularly in those cases in which we have to deal with a pathologic gastrointestinal canal. The subcutaneous use of arsenic is preferable in certain affections of the skin, as in scleroderma, lichen ruber, and in a number of diseases of the blood, as in pernicious anemia pseudoleukemia, etc. The hypodermic method has the advantages, first, that the dosage is accurate; second, that the dose is smaller than that given by mouth; third, that it does not irritate the gastrointestinal mucous membrane; and, fourth, that toxic symptoms have rarely been noticed when the inorganic salts are used.

We are indebted to Ziemssen[1] for one of the earliest and best modifications of the method of hypodermic administration of arsenic. The disadvantages of the previous methods, which mainly consisted in the simple injection of liquor potassii arsenitis (Fowler's solution), or of Pearson's solution, were the following: First, these solutions decomposed very easily; second, they were highly irritating to the subcutaneous tissue, so that in certain instances abscesses and even gangrene resulted. In order to counteract these disadvantages Ziemssen employed a 1 per cent. solution of sodium arsenite and attributes the advantage of his preparation in the fact that "it does not cause any or very slight irritation." I have used Ziemssen's solution in a number of cases, and while the results were excellent, I have found that the injections were attended with considerable pain, so much so, that in one case the patient avowed that "the cure was worse than the disease." I attributed the irritating effects of this solution to its strong alkalinity. In order to counteract the strong alkalinity I modified Ziemssen's solution as follows:

One gram of arsenious acid and 2.25 c.c. normal soda solution are boiled in 100 c.c. of distilled water until a clear solution results. This solution is filtered and enough distilled water added to make the filtrate weigh 100 gm. This 1 per cent. solution of sodium arsenite is slightly alkaline. The solution is kept in quantities of 15 c.c. in small sterilized Florence flasks, which are closed by sterile cotton stoppers. When alkaline solutions are kept for a long time in ordinary glass bottles a slight turbidity and sediment occur, due to the action of the alkali on the glass.

I tested the alkalinity of this solution in comparison with Fowler's and Ziemssen's and I found that 5 gm. of Fowler's solution required 1.2 c.c. of normal sulphuric acid solution to neutralize the alkalinity, and 5 c.c. of Ziemssen's solution required 0.48 c.c., while my modification required 0.23 c.c. of normal sulphuric acid solution. Litmus was used as indicator.

I have employed these injections in a number of cases and found that they are nearly painless; at the most they cause a slight burning, which sensation promptly disappears. I have never seen an abscess result from an injection. The injections must be made with all aseptic precautions. After the injection an alcohol dressing is advisable in order to counteract any possible infection. I begin with an injection of 0.25 c.c. and gradually increase the strength to 1 c.c. daily (0.01 gm. sodium arsenite). In one case of pernicious anemia I injected 2 c.c. (0.02 gm. sodium arsenite) every second day, without causing any toxic symptoms. Clinically the results with the modified solutions were very gratifying. The injections are made on the upper arm or between the shoulder blades.

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[1] Deutsch. Arch. f. klin. Med., lvi, 124.

Despite the favorable reports in regard to the treatment of certain skin affections and syphilis by the hypodermic use of atoxyl and the cacodylates, which contain, respectively, 37.7 per cent., 35 per cent. of pure arsenic, these organic and less poisonous combinations of arsenic have not proved nearly as efficacious as the conventional inorganic arsenic preparations in the more aggravated skin lesions, and especially in Hodgkin's disease and pernicious anemia. Another objection to the hypodermic use of the organic arsenic combinations in these diseases is found in the fact that the dose has to be a large one to be of any therapeutic use, and this circumstance frequently has caused severe arsenic intoxications with serious consequences, as the literature of the last year goes to show.

224 West Twenty-fourth Street.

AN UNUSUAL COMPLICATION OF THE OPERATION FOR CONGENITAL DISLOCATION OF THE HIP

LEONARD W. ELY, M.D.
NEW YORK

The following case seems interesting on account of a rather infrequent complication:

Patient.—O. A., a girl of 8, was brought to the Roosevelt Hospital on Oct. 23, 1908, on account of a peculiar gait which had always been present since infancy. She had never suffered pain.

Examination.—Fairly well-nourished child, walking with a decided waddle. Heads of both femurs were dislocated, the right being fairly well developed, the left not so well. Well-marked lumbar lordosis was present. Length of right leg, 53.5 cm.; length of left leg, 53 cm.

Operation.—About November 23 the child entered the hospital and shortly thereafter was put to bed with extension of thighs at a right angle to her trunk. On December 7, under ether anesthesia, the Lorenz operation was done on both hips. The adductors were broken down rather easily, and reposition was accomplished on both sides without difficulty. The stability on the right side was rather poor, but on the left good, The head on this side was prominent and in its normal place under the femoral artery. In order to prevent reluxation, the thighs were held in extreme abduction while the dressing was put on, abduction being carried well behind the plane of the body. During the application of the plaster, the house surgeon, who was holding the legs, called attention to the condition of the left leg and foot. They were bluish-red and pulseless. This was considered to be due to the constriction of the dressings at the knee, and they were loosened at that point. As the circulation in the limb had not improved, however, by the time the plaster had been applied, the cause of the difficulty was sought. No pulsation could be felt in the popliteal vessels, nor at any point below the plaster, and the foot was becoming darker and rather cold. Next the plaster was cut away over the head of the femur to relieve pressure there. The femoral artery did not pulsate. Then all the plaster was removed from the affected limb, still without producing any improvement whatever. Not until the hip was redislocated did the circulation start up.

In describing a case of gangrene after reduction of one of these hips Lorenz was wont to ascribe it to a compression of the femoral artery between the plaster and the prominent head of the femur, and this explanation has always been accepted as the correct one, as it certainly would be the most obvious. In this case, at least, if the plaster had been left on and any accident had occurred, we probably should have considered it due to this cause. In view of the facts, however, some other theory must be entertained. Evidently the dressing had nothing to do with it. We are inclined to think that the head of the superabducted femur (that is, superabducted from a position of right-angled flexion) compressed the femoral artery against Poupart's ligament and thus shut off the blood supply.

Whatever theory is entertained, this case demonstrates the necessity of watching carefully the circulation in a leg after the reduction of a congenital dislocation, both at the time of operation and afterward.

THE POSSIBILITIES OF INFECTION FROM TABLE UTENSILS AT SANATORIA*

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SARANAC LAKE, N. Y.

In the following experiments forks, spoons, teacups and milk glasses in constant use at the Reception Hospital, Saranac Lake, were used. This institution receives patients suffering with pulmonary tuberculosis, a large majority of whom are in an advanced stage of the disease, and some of whom are in the last stages.

The experiments were made without the previous knowledge of the nurses or maids of the institution, and several months apart, to avoid the possibility of the dishes receiving an unusually good washing.

For the first experiment thirty forks and twenty-five each of spoons, cups and tumblers were selected immediately after breakfast, and after ordinary good washing but not sterilization, the modus operandi of which was as follows: The utensils were first thoroughly cleansed with a mop or cloth, with soap and water as hot as the maid's hand's could stand, and then rinsed in running water as hot as it could be delivered through a pipe leading from a tank containing boiling or almost boiling water, and then dried with a cloth.

In order to obtain the material for the experiment the articles selected were, after the usual washing, well rubbed with a sterile 0.5 per cent. sodium bicarbonate solution by means of sterile cotton swabs on glass rods, and these washings used for the inoculation of guinea-pigs. The washings were taken at once to the laboratory and distributed among fifty-six guinea-pigs by subcutaneous injection into the right groin, 0.75 c.c. to each pig, and with the use of sterile syringes. The distribution was as follows:

Washings from forks, 14 pigs
Washings from spoons, 14 pigs
Washings from cups, 8 pigs
Washings from tumblers, 8 pigs
Mixed washings of cups and glasses, 6 pigs.
Mixed washings of forks and spoons, 6 pigs.

One animal died on the second day after the inoculation, and thirteen others from time to time up to the forty-first day, when all living animals were killed. An autopsy was performed on each animal at the time of its death or when killed, and all were found to be free of tuberculous infection. Smears were made on slides from the spleens and right inguinal glands of all those pigs killed on the forty-first day, and examined microscopically for tubercle bacilli, and found to be negative in every instance, nor could tubercle bacilli be demonstrated in stained specimens of the centrifugalized washings before inoculation.

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* Read before the International Congress on Tuberculosis, Washington, D. C., Oct. 1, 1908.

In the second experiment five articles of each sort were selected immediately after use and before washing of any kind, and swabbed with the 0.5 per cent. sodium bicarbonate solution as described above. These washings, which were very cloudy with particles of food, were immediately on arrival at the laboratory injected into eight guinea-pigs in the same manner as in the first experiment, the washings of each set of articles being divided between two pigs.

All these animals lived until the forty-first day, when they were killed and autopsied, and all, excepting the two inoculated with the washings from the milk glasses, were found to be tuberculous. It was an easy matter to demonstrate tubercle bacilli on slides made from the glands and spleens of these pigs, though no tubercle bacilli had been found in a casual search of smears made from the washings previous to inoculation.

The third experiment was a repetition of the first, but with the use of only six each of the utensils and twelve pigs, the washings from the different articles being distributed among three pigs. This test was made eight months later, when the dish-washing was being done by a new set of maids, but under the supervision of the same corps of nurses. The result, however, was the same.

It is fully realized that two experiments are not sufficient for definite conclusions, and that sterilization of eating utensils by heat or boiling, when possible, is not to be discouraged; at the same time when the dish-washing is thorough the danger of infection from this source does not seem to be very great.

My thanks are due to the Saranac Laboratory and the Reception Hospital for facilities placed at my disposal for the experiment, and to Dr. Baldwin, who suggested it.

121 Main Street.

CONGENITAL INSUFFICIENCY OF THE PALATE*

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ATLANTIC CITY, N. J.

My attention was first directed to this condition by Makuen of Philadelphia, who exhibited a similar case before the College of Physicians and Surgeons about a year ago. As far as I have been able to discover, there has been no reference made to it in medical literature up to the present time.

Patient.—L. C., white, female, single, aged 18, referred to me by Dr. Mary Townsend, of this city, consulted me Oct. 22, 1908. Practically her entire complaint was a marked defect in speech, which she said had existed ever since she began to talk; it was that alone which prompted her to seek medical advice. There was slight nasal obstruction and some postnasal "dropping," but these were not troublesome enough to cause any complaint in themselves. There was no history of diphtheria or other serious illness; in fact, with the exception of measles at the age of 14, which clearly had had no effect on the condition under consideration, the patient had always enjoyed good health. The family history was negative.

Examination.—The palatal reflex was absent, and the free edge of the soft palate hung so far away from the posterior pharyngeal wall that a postnasal examination could be made with a large laryngeal mirror with perfect ease. Sensation was unimpaired. Occasionally small amounts of tea and coffee come through the nose, but apparently not often enough to be troublesome. The following points were further evidence of faulty development: The uvula was short and bifurcated. The palate, while not extremely high, was undoubtedly more highly arched than the average normal one. On palpation with the finger in the mouth, or on inspection while lifting the velum upward and backward with a blunt probe, it was seen that the posterior edge of the hard palate at the point of its attachment to the soft one, presented the shape of a long narrow letter V with the apex located well forward, and that the soft palate was abnormally short and not of sufficient length to reach the posterior pharyngeal wall. Incidentally, there was a hypertrophic rhinitis with a marked hypertrophy of the tips of the lower turbinals posteriorly, with mucoid degeneration of the mucous membrane covering them.

In normal voice-production when any sounds except those of *m*, *n*, and *ng* are spoken, the soft palate is made tense by the tensor palati muscle and lifted upward and backward by the levator palati until it comes tightly in contact with the posterior pharyngeal wall, thereby shutting off all communication with the nasal cavity and causing the oral cavity to be used as the chief resonating-chamber. But, when the sounds *m*, *n* and *ng* are produced, the soft palate hangs uncontracted, the communication with the nasal cavity remains intact and the latter plays the chief rôle as a resonating chamber.

In this case, so far as results are concerned, the palate is constantly in a state comparable to that of a normal individual during the production of these three sounds; that is, it is "insufficient" to shut out the nasal cavity as it should in the production of all other sounds, thereby allowing it to participate strongly as a resonating chamber not only in the production of the sounds of m, n and ng as it should under normal conditions, and which, as would naturally be expected, she can say as plainly as anyone, but also in the production of all other sounds as well, a distinctly abnormal condition, thus imparting a strong nasal "twang" to her speech and causing her to talk through her nose.

In the development of the normal embryo, at about the fifth week the first visceral arch divides into an upper part, the maxillary arch, and a lower portion, the mandibular arch. The maxillary arches of the two sides unite at their anterior ends with the intervening nasofrontal process to form the upper boundary of the buccal cavity; the mandibulars to form the inferior boundary. In the fetus the palate process of the superior maxilla advances toward the median line until it meets and unites with its fellow of the opposite side. The horizontal plate of the palate bone develops similarly and very shortly after and thus is produced the hard palate. The two halves of the hard palate unite first in front, their union being completed about the twelfth week. Ordinarily it is stated that if union is incomplete the anomaly of cleft palate results.

In this case while union has apparently been practically complete and the patient has been fortunate enough to escape the greater evil of cleft palate, still development has not gone on to the perfection of completion (as is evidenced by the V-shaped posterior edge and the high arch of the hard palate, the short soft palate and the short and bifurcated uvula), but has been arrested in a stage which presents the above clinical picture, a condition to which Makuen very aptly gives the name of "congenital insufficiency of the palate."

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* Read before the Atlantic County Medical Society, Dec. 4, 1908.

100 St. Charles Place.

IMPORTANCE OF URINE EXAMINATION IN SUSPECTED TYPHOID FEVER

CALVIN C. MARSHALL, M.D.
PITTSBURG, PA.

History.—I was first consulted in the case of Miss B., aged 19, November 29. She had headache, general malaise and loss of appetite, November 15, and these symptoms lasted for a week. At that time she was constipated and took two ounces of sodium and potassium tartrate. She then suffered from foul smelling diarrhea which persisted for three days and was followed by constipation. About November 22 the headache disappeared, though the general malaise remained, and that evening she had several chills, followed by a rise in temperature, for which she took three grains of quinin three times a day. Pain in the abdomen appeared November 26, and seemed to follow the transverse colon. It was of gradual onset and she applied a mustard plaster but without result.

Examination.—The patient was somewhat emaciated and very weak. The pupils were slightly dilated; the sclera was clear. The tongue had a heavy gray coating with a brown crusted center. The tip and edges were clear and red but not glazed. The breath was very foul. Temperature was 101 F., pulse 88. Chest examination was negative.

Abdomen.—The abdomen was very muscular, flat, and somewhat rigid. There was no gurgling. The patient complained of pain and tenderness in the region of the transverse colon; neither of these could be localized. Percussion and auscultation revealed nothing of value. The bowels had not moved for three days and the patient stated that the urine was darker than usual.

Diagnosis.—A fellow worker was in the hospital with typhoid and I made a provisional diagnosis of typhoid and told the patient to save a specimen of the next morning's urine. I examined the urine and found it loaded with bile. I again examined the abdomen and was able to palpate a distended gall bladder beneath the edge of an exceptionally large rectus muscle. There was localized pain and tenderness and I then made a diagnosis of cholangitis. Under appropriate treatment the condition cleared up in a week.

Had the urine not been examined in this case the patient might easily have been treated for typhoid, as there was no jaundice and the color of the stools was not noted. Had this been done, cholecystitis would probably have developed with its serious results for the patient. This case should emphasize the necessity for examination of the urine in all cases of typhoid or suspected typhoid.

439 Jucunda Street.

Therapeutics

INDIVIDUAL TENDENCIES

In this era of materialism the aversion to accepting anything as a fact, unless it can be occularly, aurally, chemically, microscopically or bacteriologically demonstrated, has relegated the "temperaments," diatheses, and even atavistic heritages, into the realm of oblivion. Sir Dyce Duckworth, in an address reported in the *Lancet*, March 7, 1908, calls the attention of the profession to the consideration of the factor of inheritance in the treatment of disease. For several years teachers of therapeutics have been endeavoring to teach the necessity of individualizing the patient, but even they have forgotten the necessity for also individualizing the family. Such individualization is not only of special advantage in the treatment of chronic conditions, but is also of advantage in the treatment of acute disease.

There is no more doubt that an individual inherits family weakness and family strength, or, if the phrase is preferred, family tendencies, than there is that he inherits the features and general physique of his parents and grandparents. While it may be going a step backward to speak of temperaments, we certainly should consider, as pointed out by Duckworth, the tendencies of the individual which may be enumerated as "arthritic," scrofulous or lymphatic, nervous, and bilious." These tendencies are often recognizable by the general appearance and physical findings but if not can almost always be developed by a careful investigation into the family history of the patient.

It should be the rule of the physician to inquire into the family history as carefully with every new patient as is required in an insurance examination. The discovery of instances of arteriosclerosis, cardiac disturbances, rheumatism, gout, or other joint disturbances in a family would show the arthritic tendency. The discovery of glandular disturbances, tuberculosis, pneumonias, adenoid and tonsillar disturbances, and anemias, in a family would show a tendency to "scrofulous" and lymphatic conditions which so frequently precede tuberculosis. While the word scrofulous has come into disuse and it may be a step backward to use it, Duckworth believes that it may be applied to the condition of childhood so long recognized under that name. With instances of neuroses and neurotic conditions, perhaps mental aberrations functional cardiac disturbances and nerve disturbances in the family, the patient will probably be neurotic and all symptoms should be considered accordingly. If the family shows a series of digestive troubles, liver, stomach, intestinal and kidney, the old term of "bilious temperament" or tendency may not be misapplied, if it is thoroughly understood what it signifies.

Duckworth well says "the physiologist has a dog or a guinea-pig, or some definite organ of an animal, but rarely a man before him. The problems are not the same, and never can be. The personal factor, then, demands careful study from the physician, for men and women are not so many wooden ninepins turned in a lathe as some would have us believe. We have to reckon with seed and soil, not with seed only. Surely we have an exquisite analogy here in the sister vegetable kingdom which can not be ignored, viz.: the soil is as important to consider as the seed."

It is obviously certain that some families are predisposed to rheumatism and gout, for instance, and members of other families may be subjected to the same conditions and opportunities of infection (if we believe that rheumatism is an infection) and still not be afflicted with these diseases. Thus it seems evident that there is a something present in one individual that will combat certain conditions and diseases which is not present in another individual who is really suffering from a predisposition to conditions of certain types. These predispositions or tendencies are perfectly evident in tuberculosis, the omnipresent tubercle bacilli being constantly killed in certain individuals and readily living and thriving in others. Other persons with sickness, debility, overwork and mental worry readily become nervous and mental wrecks, while an individual from another family suffering from the same series of conditions never loses his mental or nervous caliber; again an instance of family tendency. Still other individuals, and whole families, are subject to digestive disturbances of all kinds, and are continually deciding what they shall eat, when they shall eat, and how they shall eat, while members of another family hardly know what is means to have digestive disturbances.

It, therefore, is of vital importance to the patient that his physician should know and recognize the diathesis or predisposition to certain types of disease that he has inherited, so that whatever treatment his present condition may call for, the tendency to the family weakness may be at the same time properly combated.

To be specific, a patient who has had a uric acid colic, or who has slightly increased blood pressure, or slight shooting pains in the joints, and whose family shows a tendency to gout and arthritic troubles, should not be dismissed as soon as his present condition is improved without an arrangement of his diet and life that will prevent, at least, the immediate development of a more serious condition.

A patient with pneumonia whose family shows a tuberculous tendency should not be dismissed from professional care as soon as the lung has apparently recovered. Such a patient should have a prolonged rest and fresh air cure, after he has apparently recovered, and should be carefully watched for months.

Again, a patient who has sleeplessness, who is overworking mentally, whose family is neurotic, and who comes for treatment on account of loss of appetite and a general debilitated condition, should not be dismissed as soon as he has improved in the conditions for which he sought aid without most careful advice as to the necessity for vacations, the necessity for more hours of sleep, the avoidance of too much tea, coffee, alcohol, tobacco and narcotics. Such a patient should be carefully advised of the dangers of taking nostrums and "painstops" and any hypnotic. Such patients to whom pain is not only really more intense than in other individuals, but whose pain is always exaggerated, become profitable prey for the exploiters of quack medicines and quack treatments of all kinds.

Lastly, a patient who has recurrent "bilious attacks," or other attacks of acute indigestion, and whose family shows a tendency to gastrointestinal and other abdominal disturbances, should not be lightly dismissed as soon as the acute condition has been overcome. He should be carefully advised as to his diet and the care of his stomach and bowels, and the avoidance of repeated excesses.

In other words, a careful study into the family history of a patient offers the opportunity to exercise the highest aim of the medical profession, viz.: such therapeutic advice as will prevent disease.

WATER AS A DIURETIC

Dr. T. C. Holloway, in the *Kentucky Medical Journal*, April, 1908, calls attention to the neglect of the proper drinking of water, both in acute and chronic conditions.

He points out that as a routine examination of patients whose condition we do not thoroughly understand, the amount of urine passed in twenty-four hours and the specific gravity of the twenty-four hours' output should be known, as well as the less frequently omitted examination for albumin and sugar. If the urine were more frequently examined during simple acute processes the profession would be surprised at the frequency with which disturbances of the kidney functions are found. All too frequently, when an insufficient amount of urine is passed, more or less irritant diuretics are given when simply an increased amount of water is needed.

A caution should be noted here, that with real nephritis, or with an insufficiency of the heart, or a failure of the circulation, or when there is edema, large amounts of water should not be drunk. On the other hand, in conditions in which water should be administered both as a diuretic and to dilute all the excretions, it is not sufficient for the physician to direct a patient to "drink plenty of water," but he should specify the amount of water he wishes taken during the twenty-four hours.

Especially is it necessary, during acute infective processes in children, to urge their drinking plenty of water, perhaps as lemonade, orangeade, or barley water; but water in some form should be freely given.

Holloway urges the necessity of having pregnant women drink water in larger amount than they generally do, as tending to prevent the toxemias that so readily occur from the retained products of metabolism.

Also in the preparation of patients for operation, the free administration of water during the forty-eight hours preceding the operation is a great help in clearing the body of refuse products of nitrogenous metabolism, and puts the patient in better condition to withstand the anesthetic and the shock of the operation.

NOT RHEUMATISM, BUT FLATFOOT

A man, 47 years of age, whose business required him to be on his feet a greater part of the day, complained of pains in his ankles, calves of the legs, knees, and thighs, from which he had suffered for two years. He had been treated for rheumatism, for gout, and for "uricacidemia" by different physicians, and had even taken a trip to California, where he remained for nearly three months. No treatment had been of any benefit, and even the California trip, on which he had gained twelve pounds in weight, had not prevented his leg aches.

Examination showed that the man was well; he did not have inflammatory rheumatism, chronic rheumatism, gouty rheumatism, uricacidemia; he had no spinal cord trouble, no locomotor ataxia, no specific history, no circulatory trouble, no edemas, no varicose veins, no toxemias, no metallic poisonings; he did not smoke, and therefore had no tobacco poisoning; any one or all of which might cause pain in his legs. When he was made to stand barefooted on smoked, glazed paper it was seen that he had partially lost the arch in both feet; in other words, he had become partially flatfooted, or weak-footed, as it may be better termed.

The loss of the plantar arches was the cause of such loss in the perfect transmission of the weight as to produce straining of the different muscles and tendons of the legs, and would account for his suffering. He was ordered inside shoe supports for these broken arches, and these relieved him of further trouble.

Operations on the Neck.—D. B. Delavan, in *Annals of Otology, Rhinology and Laryngology*, directs attention to the fact that operations for the removal of new growths of the neck in which the necessary dissections approach the vicinity of the recurrent laryngeal nerves may easily be attended with injury to them, as also may attempts at the extirpation of diseased lymph nodes lying near to the larynx or trachea.

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[*For other information see second page following reading matter*]

SATURDAY, FEBRUARY 13, 1909

DR. WILEY AND BENZOATE OF SODA

The referee board appointed by President Roosevelt to review some of the decisions made by the Bureau of Chemistry, according to press reports, has reversed the findings of Dr. Harvey W. Wiley regarding the harmfulness of benzoate of soda as a food preservative. The first question to engage the attention of this board was that dealing with the influence of sodium benzoate on the nutrition and health of man; the larger—and to the public, the more important—question as to the fraud which the use of this chemical permits manufacturers to impose on the consumer, has not yet been dealt with. Briefly stated, the referee board—the scientific attainments and unimpeachable reputation of whose personnel requires that its decisions be given the most thoughtful consideration—has, in a series of experiments on "poison squads" extending over a period of four months, reached results diametrically opposite to those arrived at by Dr. Wiley in a similar series of experiments which he conducted for nearly a year.

This decision of the board leaves the question of the physiologic action of sodium benzoate on the community practically where it was before; that is, that while the substance is known to be a bacterial poison, its deleterious action on the human organism is, in the words of the Scotch verdict, "not proven."

It is greatly to be regretted that the public announcement of the decision of the referee board should not have been so worded as to make clear to the public mind the limitations of the question under consideration. There is some danger that to the public the decision will mean that Dr. Wiley's work is discredited, when as a matter of fact it means nothing of the sort. The point that the board's report emphasizes is that under the conditions of the experiments—which consisted in giving healthy young men certain definite quantities of sodium benzoate for a period not exceeding four months—the preservative is without deleterious action and is not injurious to health. To assume from these findings that the use of benzoate of soda in foodstuffs is therefore beyond criticism is absolutely unwarranted, and there is little doubt but that the board itself would be the last body to sanction such an assumption. Neither is there the slightest ground for assuming from the experiments that benzoate of soda in milk used by infants and invalids is not deleterious or injurious.

Benzoate of soda is incorporated in foods for one—or both—of two reasons: to take the place of cleanliness and care in preparing, or to permit the use of inferior products. The use of sodium benzoate is unnecessary; this has been proved for years by some of the higher-grade manufacturers of preserves and catchups, and for centuries by the housewife. But when the chemical preservative is not used, cleanliness, care and wholesome raw products must be. Those manufacturers, therefore, who would market stale meat for fresh, who would substitute canners' waste for fresh whole fruit, who look on clean factories and careful methods as a needless expense, are the ones to whom the use of benzoate of soda appeals.

Of course the findings of the board have been received with rejoicings by those who have wanted to "get Wiley's scalp." "Now Wiley will have to resign," "This ends Wiley's drastic rulings," are samples of expressions that are coming from press agents of manufacturers of inferior foodstuffs and of preservatives. The fact is, the fight on Dr. Wiley, and the powerful efforts that have been made to discredit his work and to have him officially destroyed, are solely on account of the "interests" he has offended. This he has done by opposing the "bleaching" of flour by which inferior grades would be "doctored" so as to be sold as fine grade; by objecting to the artificial "greening" of canned vegetables by means of copper salts; by insisting that alcohol mixed with burnt sugar and prune juice shall not be sold as whiskey; by requiring that the "patent-medicine" manufacturers shall tell the truth on the labels; in fact, he has offended in that he has brought the people of this country to a full realization of the amount of sophistication and adulteration that exists, or did exist, in the food products industries of the country. As an example of the opposition which the chief chemist has met, a self-styled "food expert," who sometimes signs himself H. H. Langdon and sometimes H. L. Harris, and who has done the "press agent" work of the Pacific Coast Borax Co., has attempted for years to vilify and belittle both Dr. Wiley and the work of his department. There is no doubt that as soon as the matter can be prepared, such discredited journals and papers as will accept his "reports" will publish Langdon's highly colored "original articles" based on false interpretations of the findings of the referee board.

Possibly Dr. Wiley may have overstated or overemphasized the toxicity of some of the preservatives that have been used in foods, but if he erred he did so in the interest of the public's health instead of to the benefit of the dishonest manufacturer's pocket-book. While this may be a heinous offense in the eyes of the "interests" affected, the American people will entertain another opinion. As one paper, in speaking of the canners who are anxious to have the ban removed from benzoate of soda, says: "They would like to market stale meat, decayed fruit and half-cooked provender. And if they can turn the public off the scent of these by keeping our thoughts on the preservative instead of on the stuff preserved, they will soon be paying high dividends."

It is to be hoped that Dr. Wiley will be in no way discouraged and will remain at his post and continue to hew to the line. He is a government official of a type that happily is becoming more common—one of those men who appreciate that they represent the public and that they are expected to look after the interests of the public and not the interests of any class. He has exposed fraud connected with "patent medicines" and with the pharmaceutical business; with fruit and food-canning interests, and to him more than to any other individual or body must the credit be given for the national Food and Drugs Act. No wonder he is so cordially hated by those who heretofore fattened at the expense of public health and well-being. But the American people are with Dr. Wiley and emphatically approve of his work.

The case against benzoate of soda, from the standpoint of the man in the street, has been well summed up by Federal Judge Anderson in a suit brought by some manufacturers to enjoin the State Board of Health of Indiana from enforcing that portion of the pure food law relating to the use of this chemical: "I am impressed with the proposition that this stuff, benzoate of soda, is put in there for reasons that make its prohibition reasonable and proper—to cover up careless methods of manufacture. Dirt and insanitary conditions can be concealed by putting this stuff in. It is not necessary to put it in if the materials are properly handled. If its use conceals the fact that proper methods have not been used, a rule of the State Board of Health prohibiting its use is reasonable."

ANTIGENS AND ANTIBODIES

The discovery that the animal body reacts to the introduction of certain kinds of substances by the formation of new antibodies with specific action is one of the most important events, not only in modern medicine, but in general biology as well. Substances that cause antibodies to form are called antigens. One outstanding characteristic of all the phenomena is that the antibody reacts with the antigen in question in each particular case in a more or less specific manner. One may say that each antigen gives rise to its own antibody; this antibody usually, however, has some effect also on substances related to the antigen concerned, and this side-effect is the more marked the closer the relationship. For the purpose of this general discussion it is sufficient to point out that whether substances other than proteins can cause antibody formation is not yet settled. Concerning the antigenic power of protein-containing substances there is no question. Bacteria, bacterial products, serum, blood corpuscles and other cells, and certain vegetable and animal toxins, constitute at present the best known antigens. Exhaustive discussion of all these antigens and the corresponding antibodies is, of course, out of question in this place, but some of the general features may be considered.

In the first place, we have the question whether certain antibody effects are produced by one antibody or by more than one. The problem is best illustrated by a concrete example: When a suitable animal is injected with a quantity of dead bacteria, e. g., typhoid bacilli, or with a quantity of alien red corpuscles, the blood fluid of the injected animal soon acquires the power to agglutinate, to opsonify, to cause lysis of, and to produce precipitates with extracts from, the kind of bacteria or corpuscles injected, as the case may be. If the blood fluid possessed any or all of these properties before, they become greatly increased as a result of the injection. The question is, are all these effects produced by one or by several antibodies? The indications are that there are different antibodies, first, because there appear to be different antigens. Thus treatment of cholera vibrios with chloroform removes their agglutinogenic power while the lysinogenic power is retained. Then again the different antibody effects may not be produced in equal degree proportionately by the serum of the injected animal as would be expected if they were owing to one and the same antibody; on the other hand, the agglutinating and opsonic power may be increased greatly while the lytic power may not be increased at all, and this naturally speaks in favor of different antibodies and different mechanisms of antibody formation.

There are also certain bacteria that apparently are devoid of the power to produce lysin at the same time as they are insusceptible to lysis, while they contain the antigen that produces specific opsonin and are readily susceptible to opsonification. Streptococci, pneumococci and tubercle bacilli are examples. In this case the claim has been made that lysins may be present in the serum of the injected animal but not be demonstrable because of the physical state of the bacterium which makes it refractory to lysis. As yet this claim is without any real basis of support and the facts stated harmonize well with the conception that lysis, opsonification, etc., depend on different antibodies for the new production of which distinct antigens are required.

In the second place, the animal body responds to the action of antigens in a fairly typical and regular manner. The course of antibody formation after introduction of antigen was first determined accurately in the case of animals immunized with various toxins, more particularly tetanus and diphtheria toxins. Omitting certain other unimportant and historical details, suffice it to say that the introduction of a single dose of active antigen into a suitable animal, the blood of which has a stationary antibody content (either normally, a common occurrence, or as the result of immunization at such time previously that a steady level has been reached), then there is first a fall in the antibody in question lasting a day or two and called the negative phase; this is then followed by a rather rapid rise above the normal or previous level, the high point being reached usually between the eighth and twelfth days, sometimes *earlier in animals previously injected;* a rather sharp fall now commonly takes place, but the curve is still far above normal, to which line the return is gradual and sometimes prolonged. This may be called the normal antibody curve, as it seems to answer for *practically all antibodies* that are formed anew under conditions that are fairly comparable, and this would indicate that there exist in the animal body well-ordered mechanisms for antibody formation. The specificity of the antibody being marked, even the fall is limited to the antibody for the antigen injected, it may be inferred that either there are many similar yet distinct mechanisms in the body or, if it concerns one general mechanism, that the kind of product delivered will depend on the nature of the stimulus or antigen.

Finally, it may be stated that in the acute, self-limited diseases, like pneumonia, erysipelas, diphtheria and others, *the course of antibody formation* in the typical attack with prompt recovery corresponds to that following a single introduction of antigen, at least so far as the opsonin is concerned. Viewed from this standpoint, the attack is an immunization, the regular progress of which, however, is subject to deviations when the infection is especially severe and complications arise.

WEIR MITCHELL AT EIGHTY

On next Tuesday, Feb. 15, 1909, the veteran American physician and author, Dr. S. Weir Mitchell, will reach his eightieth year. In congratulating him the medical profession at the same time felicitates itself on the greatness and versatility of the achievements of one whose name is as a household word among us.

Two facts in Dr. Mitchell's career stand out with prominence: first, that success in any field need not be despaired of because it delays its appearance until well into middle age, provided only that the waiting period has been devoted to an apprenticeship of earnest and faithful work; second, that there is no essential incompatibility between sustained literary activity, on the one hand, and high professional distinction in science, with successful medical practice, on the other. In illustration of the first point it is worthy of note that, while to a considerable circle Dr. Mitchell's literary work had been known for many years previously, it was not until the publication of his novel "Hugh Wynne," in 1897, that he first achieved an enviable recognition in the world of letters. Yet his first published work, a volume of short stories, appeared in 1880—and even that had been preceded by contributions to the magazines for nearly twenty years—and was followed with remarkable regularity by other publications.

As regards the second point, the medical profession in many countries has furnished men of attainments and eminence in literature and art; but, for the most part, their services have been lost to medicine in direct proportion as they have been gained by literature and art. In Dr. Mitchell, however, we have a conspicuous example of the fact that not only a passive interest, but an active pursuit, of science and literature can coexist with benefit to both. His contributions to medical science, and more particularly to neurology, have been both numerous and weighty, reaching on the one side to the arcana of medical science, and on the other to the most practical applications, which are typically represented in what is known all the world over as the "Weir Mitchell treatment" for nervous breakdown. Dr. Mitchell's science has undoubtedly been broadened and rendered more human by his worship at the shrine of the Muses, as his literature has been enriched by excursions into fields demanding for their portrayal a degree of scientific observation that could not have been available at the hands of one of lesser scientific and professional attainments. And the remarkable thing is that Dr. Mitchell has not devoted so very much of his time to pure literature. It has been the regularity and the quality of his application thereto, rather than its quantity, that has enabled him to achieve such a considerable measure of distinction. He has always regarded this form of mental exercise as a diversion from the grind of professional labor, writing only during the ample vacation he allows himself in the summer, and never permitting literary pursuits to interfere with professional work and practice and the duties in connection with the Carnegie Institution, the University of Pennsylvania, etc., to which the winter is entirely devoted.

Best of all, however, is the fact that to-day, at the age of 80, he is still in harness, and, so far as can be seen, with no diminution of either activity or powers. It is truly remarkable that a man keeping up in active practice should have accomplished what Dr. Mitchell has accomplished after reaching what is usually regarded as the retiring age. He was 68 when he gave us "Hugh Wynne," a novel that placed him among the first of American novelists; but he has since written "François," "Dr. North and His Friends," "Circumstance," "Constance Trescott," "Autobiography of a Quack," and, within a few weeks, his latest novel, "The Red City," besides many short stories, essays and poems.

The Journal, on behalf of the medical profession of the United States, extends to Dr. Mitchell greetings and felicitations on his eightieth birthday, with the hope that he may yet have before him many hale and happy years.

HEART HYPERTROPHY AND NEPHRITIS

Heart hypertrophy in nephritis seems always to offer problems that defy the pathologist, in spite of the abundant material that is always at hand for his study. Not only do we lack definite knowledge of the cause of the increased blood pressure which leads to the hypertrophy, but we have no consistent data as to just what sort of anatomic changes must be present in the kidney in order that heart hypertrophy may result. While the classical text-book dogma that parenchymatous nephritis leads to edema without heart hypertrophy and that interstitial nephritis leads to hypertrophy with little or no edema is correct in a considerable proportion of cases, yet the exceptions are so abundant as to make the rule of little value in explaining the relation of renal changes to heart hypertrophy. Hypertrophy accompanying typical parenchymatous nephritis is by no means rare, while even more common is the occurrence of advanced interstitial changes without hypertrophy.

Jores[1] has made a systematic study of the occurrence or absence of hypertrophy in advanced interstitial nephritis, and finds that the failure of hypertrophy is usually observed when the kidney shows the changes characteristic of that form of nephritis commonly known as the secondarily contracted kidney. In the typical red granular kidney hypertrophy is seldom missing, but even here there may be exceptions.

One hypothesis which has found considerable favor is that the degree of cardiac enlargement depends on the extent to which the glomeruli are involved, but Jores was unable to confirm this. It is, indeed, a striking fact that in amyloid kidneys, in which the glomeruli are most extensively involved, hypertrophy is almost invariably absent or slight, even when the amyloid changes are accompanied by a considerable degree of connective tissue increase and contraction. In the secondarily contracted kidney, glomerular fibrosis is usually marked, although heart hypertrophy is commonly slight or lacking. Equally inconstant is the relation between the amount of destruction oft parenchymatous tissue and the cardiac involvement.

The total failure to correlate in any constant and definite way the anatomic changes in the kidney with the heart hypertrophy leads only to the assumption that the cause of the increased blood pressure must be formed or accumulated independently of the structural alterations in the kidney, and, therefore, presumably outside the kidney. It may well be that the substances which are abnormally present in the blood in nephritis and which cause the increased blood pressure are quite distinct from the poisons that cause the kidney changes, and these both may be quite different again from the poison or poisons that cause uremia; such a view is at least in agreement with the manifest lack of correspondence in the relative intensity of these three features in cases of interstitial nephritis.

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[1] Verhandl. deutsch. path. Gesellsch., 1908, xii, 187.

ENTEROGENOUS CYANOSIS

Enterogenous cyanosis was first described by Stokvis[1] of Rotterdam in 1902. The case he reported was that of a soldier who had cyanosis of four years' duration associated with chronic diarrhea. On spectroscopic examination of the patient's blood Stokvis recognized the spectrum of methemoglobin and attributed the cyanosis to the presence of this substance in the blood. In the same year Talma of Utrecht showed that the methemoglobin of enterogenous cyanosis was intracorpuscular, as distinguished from that of drug poisoning in which the methemoglobin may be found in the blood plasma. Three years later van der Bergh distinguished, for the first time, between enterogenous cyanosis due to methemoglobin and that due to sulph-hemoglobin. Solutions of sulph-hemoglobin and methemoglobin both show spectroscopically an absorption band in the red. The two bands, however, are in different positions and that of methemoglobin disappears on the addition of ammonium sulphid to the solution, while the band of sulph-hemoglobin persists. In the following year van der Bergh and Gutterinck demonstrated the presence of nitrites in the corpuscles of patients suffering from methemoglobinemia. Since nitrites are capable of converting oxyhemoglobin into methemoglobin it is probable that the methemoglobin owes its existence to the presence of nitrites in the red blood corpuscles. In a case of methemoglobinemia reported by Gibson and Douglas, a bacillus resembling the colon bacillus was obtained from the blood culture. West and Clarke, who studied a case in which the blood culture was sterile, point out the fact that this single observation of an organism in the blood should be verified before too much meaning is attached to it. In all, thirteen cases of enterogenous cyanosis have been reported, five of these being due to sulph-hemoglobin and eight to methemoglobin, though the first four cases described as methemoglobinemia were reported before van der Bergh's discovery of sulph-hemoglobinemia and may have belonged to the sulph-hemoglobin group. All the cases which were certainly methemoglobinemia were characterized by cyanosis of from three to eight years' duration, weakness, diarrhea, and in three out of the four cases, headache. In three instances nitrites were demonstrated in the blood. The cases of sulph-hemoglobinemia have been characterized by cyanosis sometimes associated with headache and weakness and always with constipation.

Medical News

DISTRICT OF COLUMBIA

Measles Epidemic.—During January, 1,210 cases of measles were reported to the District board of health, and during the last week of the month a daily average of 42 new cases developed.

Transplantation of Knee Joint.—The daily press of last week gave sensational accounts of the alleged transplantation of a leg by Dr. George Tully Vaughan. Dr. Vaughan reports that the case was not intended for publication, even in medical journals, until the results had been ascertained. The operation consisted of the exsection of a tuberculous knee joint from a man, including the lower end of the femur and upper end of tibia without the patella, replacing these structures with the corresponding length of knee-joint obtained from a recent corpse. The bones were united with iron wire and part of the periosteum and fascia were united with catgut sutures. The operation was done January 24, and the patient is reported as doing well so far. The joint removed was suppurating and this has continued, but with signs of cessation. Dr. Vaughan states that, of course, it is too early to call the operation a success.

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[1] For the literature consult: Stokvis: von Leyden's Festschr., 1902, i, 597; Nederl. Tijdschr. v. Geneesk., 1902, ii, 678.

Talma: Berl. klin. Wehnschr., 1902, xxix, S., 865; Nederl. Tijdschr. v. Geneesk., 1902, ii, 721.

van der Bergh: Deutsch. Arch. f. klin. Med., 1905, lxxxiii, 86; van der Bergh and Gutterinck: Berl. klin. Wehnschr., 1906, S. 7; Gibson and Douglas: Lancet, London, 1906, i, 72; West and Clarke: Lancet, London, 1907, i, 272.

GEORGIA

Ultimatum to Insurance Companies.—The physicians of Elbert county, with one exception, have agreed that, beginning March 1, they will not make examinations of any kind for any insurance company for less than $5.

New Medical Staff.—The new medical staff of Grady Hospital, Atlanta, consists of six appointees from the Atlanta College of Physicians and Surgeons, six from the Atlanta School of Medicine, six from the city at large, and an associate medical board of four members.

Personal.—Drs. Samuel S. Gaulden, Quitman, and John L. Walker, Waycross, have been appointed members of the State Board of Medical Examiners.——Dr. William C. Lyle has been elected city chemist and bacteriologist of Augusta.——Dr. Walter C. Bryan, Douglas, is said to have given up the practice of medicine to enter the Atlanta Law School.

Medical Legislators.—There have been elected to the senate of Georgia the following practitioners: Drs. J. L. McClain, Glennville, from the second district, and Robert Y. Rudicil, Summerville, from the forty-second district. The following physicians are members of the house of representatives: Drs. George L. Paulk, Allapaha; W. E. Beacham, Pinehurst, George Brown, Atlanta; Albert S. J. Stovall, Elberton; O. O. Simpson, Norcross; Lamartine G. Hardman, Commerce; H. L. Culberson, Lincolnton; Samuel A. Brown, Eton; William T. Rogers, Coleman; Augustus R. Wright, Brooklyn; James L. Kennedy, Manassas; William H. Hendricks, Tifton; James F. Johnson, Hiawassee; T. N. Berry, Blairsville; James W. Smith, Monroe, and John H. Alley, Nacoochee.

Sanatorium Board Named.—The following physicians have been named by the governor as members of the board of trustees or managers for the State Sanatorium for the Treatment of Tuberculosis: First district, Dr. P. S. Clark, Darien, McIntosh county; second district, Drs. Everett Daniels, Moultrie, Colquitt county, and Robert C. Woodard, Adel, Berrien county; third district, Dr. Charles H. Richardson, Montezuma, Macon county; fourth district, Dr. Henry R. Slack, Lagrange, Troup county; fifth district, Dr. Thomas R. Whitley, Douglasville, Douglas county; sixth district, Dr. Marcus F. Carson, Griffin, Spalding county; seventh district, Dr. Charles F. McLain, Calhoun, Gordon county; eighth district, Dr. William I. Hailey, Hartwell, Hart county; ninth district, Dr. Jeff Davis, Toccoa, Stephens county; tenth district, Dr. William B. Crawford, Lincolnton, Lincoln county, and eleventh district, Drs. Judson A. Butts, Brunswick, Glynn county, and Wade H. Born, McRae, Telfair county.

ILLINOIS

To Select County Officer.—An examination for chief of the medical staff of the Dunning institutions will be held March 2 and 3 at the Cook County Building, Chicago. The salary is $2,500, with board, room and washing.

Exonerated on Murder Charge.—In the Franklin County Circuit Court in Benton, February 2, Dr. Benjamin F. Brayfield, Mulkeytown, was exonerated of the charge of causing the death by poison of Reuben F. Parrish, of that place.

Verdict Against Physician.—In the suit for $25,000 damages, brought by Edward L. O'Neil against Dr. Lars P. Jacobson, Kankakee, in which malpractice in a case of varicocele was claimed, the jury is said to have rendered a verdict in favor of the plaintiff and awarded $400 damages.

Chicago

Money for Charity.—In the recent entertainment given at the Colonial Theater for the benefit of the Chicago Charity Hospital, over $1,500 was netted.

Contagious Disease Situation.—The contagious disease mortality is at present lower than during the corresponding period of last year. There were 25 deaths during the week ended February 6, from diphtheria, scarlet fever, measles and whooping cough, which compares favorably with 29, the number reported for the preceding week, and 28, the number for the corresponding week of 1908. During the week 19 fewer cases of diphtheria and 15 fewer cases of scarlet fever were reported, but an increase of 45 cases of measles was noted. Two unvaccinated children suffering with smallpox were removed to the Isolation Hospital.

American School Hygiene.—The third congress of the American School Hygiene Association is to be held in Chicago February 22-25. The meeting will be held with that of the Division of School Superintendents of the National Educational Association. On the first day there will be a meeting of the executive committee and the council. On February 23 the president, Dr. Henry P. Walcott, chairman of the Massachusetts State Board of Health, will deliver his annual address, and the Committee on the Status of Instruction in Hygiene in the Schools and Colleges of America will make its report, and during the three days of the active meeting many papers will be presented by prominent educators and professional men, dealing with school hygiene, prophylaxis and medical inspection.

Darwin Centenary.—Darwin anniversary addresses are being given under the auspices of the Biological Club of the University of Chicago. The lectures are open to the public, and the following are the remaining lectures of the course:

February 17.—"Variation and Heredity." Prof. W. L. Tower.

February 18.—"The Interpretation of Environment." Prof. H. C. Cowles.

February 24.—"Darwinism and Political Science." Prof. C. E. Merriam.

February 25.—"Human Evolution—Physical and Social." Dr. George A. Dorsey.

March 3.—"The Influence of Darwinism on Psychology." Prof. J. R. Angell.

March 4.—"The Theory of Individual Development." Prof. F. R. Lillie.

March 10.—"The Evolution of Religion." Prof. Shailer Mathews.

March 11.—"Darwinism and Experimental Methods in Botany." Prof. D. T. MacDougal.

March 17.—"Evolution in Language and in the Study of Language." *Prof. C. D. Buck.*

March 18.—"Selection, Mutation, and Orthogenesis." Prof. C. O. Whitman.

KANSAS

Election.—At the annual meeting of Edwards County Medical Society the following officers were elected: President, Dr. Elmer E. Haynes, Lewis; vice-president, Dr. Prince A. Pearson, Kinsley; secretary, Dr. C. W. Rairdon, Lewis; treasurer, Dr. W. P. Stollenberger, Kinsley; delegate to the state medical society, Dr. Monroe De Tar, Kinsley; censors, Drs. Will L. Borst, Belpre; C. W. Rairdon, Lewis, and Prince A. Pearson, Kinsley.

MAINE

Fire in Hospital.—On January 17, with a temperature far below zero in a raging blizzard, the Trull Hospital, Biddeford, was destroyed by fire. By the exertion of the nurses and house staff, the fifteen patients were removed without casualty. The loss is estimated at $40,000.

Personal.—Dr. Horace K. Richardson, Bradford, has recovered from his operation for appendicitis and resumed practice——Drs. Paul S. Hill, Fitz E. Small, Clarence F. Kendall, H. Willis Hurd, Eugene D. O'Neil, Biddeford, and Dr. Laura M. Black, Saco, have resigned as members of the staff of the Webber Hospital, Biddeford.

Medical Society News.—At the January meeting of Kennebec County Medical Association, held in Augusta, it was voted to adopt the standard constitution. Drs. Luther G. Bunker, Waterville, and Fred. E. Strout, Gardiner, were selected as delegates to the state medical association, and Drs. Mathew S. Goodrich, Waterville, and Alton Sawyer and Wooster P. Giddings, Gardiner, were elected censors.——At the fifty-fifth annual meeting and banquet of the York County Medical Society, held in Biddeford, the members of the Cumberland County Medical Society and the Clinical Club of Portsmouth, N. H., were the guests of honor. The old officers were re-elected.

MARYLAND

Personal.—Dr. J. Percy Wade, superintendent of the Maryland Hospital for the Insane, Catonsville, sailed for the Mediterranean and Egypt January 27.——Dr. Taylor E. Darby has returned from the Canal Zone and will resume practice in Barnesville.——Dr. Gordon T. Atkinson, Crisfield, formerly comptroller of the state, is ill with bulbar paralysis at the University Hospital, Baltimore.

Antituberculosis Association.—At the meeting of the Maryland Association for the Prevention and Relief of Tuberculosis, February 4, Dr. H. Barton Jacobs, Baltimore, was re-elected president. The receipts for 1908 were $13,932 and the expenditures $12,196. The tuberculosis exhibit was shown in twenty-five different localities during the year, and was seen by about 100,000. An average of four lectures was delivered at each place and twenty public addresses were also made. It was decided that on account of the growth of the work a committee should be appointed to appeal to the city and state for a fund for its continuance.

Baltimore

The Frick Collection.—The report of the Frick Collection, a department of the library of the Medical and Chirurgical Faculty of Maryland for 1908, shows that the collection now numbers 3,368 volumes. During the year 152 volumes were purchased, and 99 volumes were donated to the collection. There were 4,358 readers during the year and 1,541 books were borrowed for home use. The receipts were $1,038.86, and there was a balance on hand January 1 of $830.36.

Personal.—Dr. Alexius W. McGlannan has been appointed chief surgeon of the First Brigade, Maryland N. G., vice Dr. Isaac R. Trimble, deceased.——Dr. William Osler, who is now in Italy, expects to attend the dedication of the new building of the Medical and Chirurgical Faculty of Maryland, May 13 and 14.——Dr. William G. MacCallum, assistant professor of pathological physiology at Johns Hopkins Medical School, has been elected a member of the faculty of medicine of Columbia University, New York City, vice Dr. T. Mitchell Prudden.——Drs. Thomas S. Cullen, Guy L. Hunter, Richard H. Follis, Josiah M. Slemons, J. Staige Davis and Frank R. Smith have been appointed members of the executive committee of the Church Home and Infirmary .

MASSACHUSETTS

Personal.—Dr. Francis H. Davenport, Brookline, has sailed for Europe.——Dr. George W. Dow has been appointed city physician of Lawrence and Dr. Peter McKallagatt a member of the Lawrence board of health.

Council Meeting.—At the meeting of the Council of the Massachusetts Medical Society, February 3, Drs. John L. Morse, Boston; Robert P. M. Ames, Springfield, and Charles E. Durant, Haverhill, were elected delegates to the American Medical Association, Dr. Frederick J. Ripley, Brockton, alternate; Drs. Leonard Huntress, Lowell, and John F. Croston, Haverhill, delegates to the Maine Medical Association; Dr. Henry Colt, Pittsfield, was elected delegate to the Connecticut Medical Society; Drs. Godfrey Ryder, Malden, and Henry S. Kilby, North Attleboro, were elected auditors for the treasurer's accounts. The Committee on Ophthalmia Neonatorum reported that it favored the distribution of circulars relative to the diseases, and it was voted to place these circulars in the hands of nurses, and to send them to all members of the society. It was voted to increase the number on the Committee on the Investigation of Contract Work, which is now composed as follows: Drs. William A. Dolan, Fall River; J. Arthur Gage, Lowell; Charles E. Durant, Haverhill; Amasa E. Paine, Brockton, and John W. Spooner, Hingham. Dr. George W. Gay, Boston, for the Committee on State and National Legislation, reported that thirty bills of medical interest had been introduced in the legislature. One of these bills, which is to combine the boards of registration in medicine, dentistry, veterinary medicine, pharmacy and embalming, with the appointment of one man with a salary of $1,500 per annum to act as commissioner, is considered as against public policy, and it was voted unanimously to send a remonstrance to the legislature. Dr. Frank G. Wheatley, North Abington, was elected to fill the vacancy on this committee caused by the death of Daniel D. Gilbert, Boston. At the suggestion of the Committee on Pharmacy of the American Medical Association the following committee was elected to consider the preparation of the next issue of the United States Pharmacopeia and prepare suggestions for the convention of 1910: Drs. Frank G. Wheatley, North Abington; William P. Bolles, Roxbury; Maurice V. Tyrode, Boston.

MISSOURI

State Board Election.—The secretary of the State Board of Health of Missouri announces that at the election held January 6, in Jefferson City, Dr. Albert H. Hamel, St. Louis, was elected president; Dr. Ira W. Upshaw, St. Louis, vice-president; and Dr. James A. B. Adcock, Warrensburg, secretary.

Personal.—Dr. Joseph W. Greene, Independence, has been appointed secretary of the Jackson County Board of Health.——The office of Dr. Thomas N. Bogart, Excelsior Springs, was damaged by fire January 26, to the extent of about $4,000.——The house of Dr. Colburn H. Wilson, St. Louis, was damaged by fire January 30, to the extent of $3,800.——Dr. Francis B. Odell, Kansas City, has been made medical director of the Great American Life Insurance Company, vice Dr. Hal P. Wells, St. Louis, resigned.

Hospital Notes.—The directors of the German Hospital Association, Kansas City, announced at the annual meeting that it was practically decided that the present hospital buildings are to be substituted by new and more modern buildings at a cost of $75,000. During the year 782 patients were admitted to the hospital, 68 of whom were charity patients.——An agreement filed at the recorder's office, St. Louis, January 25, reveals the reason why the St. Louis Skin and Cancer Hospital will not erect its new building on Forest Park boulevard. The hospital is to receive $500 from the Forest Park Residents' Association, and in return therefor agrees not to build within the district.

St. Louis

Reprint Collections.—In 1906, Dr. George Homan, then president of the St. Louis Medical Society, laid before that society the suggestion that every member who had contributed papers on scientific subjects for publication in any medium should present to the society a complete set of his reprints, and should continue to present a reprint of any article published by him in the future. It was further suggested that if the project were well received by the members, its scope might be enlarged, and all prominent medical writers be invited to add their contributions. This proposition was at once acted on, and the collection has now attained considerable proportion. The report of the reprint collection of the St. Louis Medical Society for 1908 shows an array of titles on a wide variety of subjects, and by a large number of authors. The library committee desires the enlargement of scope foreshadowed in the original recommendation and will be glad to receive reprints from authors not members of the St. Louis Medical Society. These should be addressed to the Library Committee, 3523 Pine Street, St. Louis. The value of such collections is evident and the plan is worthy of imitation.

MONTANA

Society Meeting.—At the annual meeting of Park County Medical Society, held in Livingston, January 12, Dr. Byron L. Pampel, Livingston, was elected president; Dr. Frederick Cuttle, Hunters' Hot Springs, vice-president; and Dr. John B. Beeson, Livingston, secretary.

Personal.—Dr. Louis E. Safley, Livingston, has recovered from injuries received in a recent automobile accident.——Dr. B. Consler, formerly of Glendive, has been elected physician of Dawson county.——Dr. Lillian Miller, Billings, has been selected as physician of Yellowstone county.

Communicable Diseases.—Smallpox is reported to have broken out in the construction camp at Garrison.——Scarlet fever is said to be spreading rapidly throughout Anaconda.——It is reported that there are at least twenty cases of scarlet fever in Great Falls, and a number of deaths have already resulted from the disease.

NEBRASKA

Personal.—Dr. Archibald L. Muirhead, Omaha, has been elected a member of the board of secretaries of the State Board of Health, vice Dr. George H. Brash, Beatrice.——Dr. G. L. Row has succeeded Dr. Frank E. Osborn as superintendent of the State Institution for Feeble-Minded, Beatrice.——Dr. Harry L. Wells, West Point, has declined the appointment of assistant physician at the State Hospital for the Insane, Norfolk.

Society Meetings.—At the annual meeting of the Elkhorn Valley Medical Association, held in Norfolk, January 19, the following officers were elected: President, Dr. Joseph M. Aikin, Omaha; vice-presidents, Drs. A. B. Tashjean, Norfolk, and Czar C. Johnson, Creighton; secretary, Dr. William R. Peters, Stanton, and treasurer, Dr. Walter H. Pilger, Norfolk. The midsummer meeting of the association will be held in Fremont.——The annual meeting of Johnson County Medical Society was held in Tecumseh, and the following officers were elected: Dr. George J. Rubelman, Tecumseh, president; Dr. J. L. Archerd, Cook, vice-president; and Dr. Albert P. Fitzsimmons, Tecumseh, secretary-treasurer and delegate to the state medical society.——Madison County Medical Society, at its annual meeting in Norfolk January 19, elected Dr. Alexander Baer, president; Dr. J. H. Mackay, vice-president, and Dr. Walter

H Pilger, secretary-treasurer, all of Norfolk.——At the annual meeting of Dodge County Medical Society, held in Fremont, January 15, Dr. Charles Inches, Scribner, was elected president; Dr. Daniel G. Golding, Fremont, vice-president; Dr. Hamilton N. Morrow, Fremont, secretary; Dr. Robert C. McDonald, Fremont, treasurer; Dr. Leander B. Smith, Fremont, censor; Dr. Charles R. Byers, Nickerson, delegate to the state medical society, and Dr. John J. Metzinger, Fremont, alternate.——Dr. J. Lue Sutherland has been elected president, Dr. Phelan vice-president, Dr. George Roeder treasurer, and Dr. B. L. McGrath, secretary of Hall County Medical Association.

NEW HAMPSHIRE

The State Sanatorium.—Work on the State Sanatorium for Tuberculosis, now being constructed at Glen Cliffe, will be completed by February 15. The original appropriation of $50,000 has been expended and the legislature has been asked for a second appropriation of $35,000. The work now in hand includes an administration building, power hourse, a ward to accommodate 20 patients, and provision for adequate water supply. The state owns 400 acres of land and has option on several hundred acres more for the use of the institution.

Personal.—Dr. Henry B. Quinby, Laconia, has been elected governor of New Hampshire.——Dr. Gustav Lafontaine has succeeded Dr. Joseph E. A. Lanouette as a member of the board of health of Manchester.——Drs. Elmer M. Miller, Woodsville, and Charles A. Fairbanks, Dover, are members of the state legislature and of the committee of public health of that body; Dr. Henry W. Boutwell, Manchester, is a member of the governor's council from the second district.——Dr. Jacob H. Gallinger, Concord, has been re-elected United States Senator for the fourth term.

Society Meetings.—Nashua Medical Association, at its annual meeting, elected the following officers: President, Dr. Alonzo S. Wallace; vice-presidents, Drs. Henry O. Smith and William E. Reed; secretary, Dr. Eva M. Locke; treasurer, Dr. Arthur L. Wallace; and historian, Dr. Charles B. Hammond.——Grafton County Medical Society, at its annual meeting, elected Dr. George W. Hazelton, Haverhill, president; Dr. Milton S. Woodman, West Lebanon, vice-president; Dr. George A. Weaver, Warren, secretary-treasurer; Dr. William T. Smith, Hanover, delegate to the state medical society; Dr. Charles R. Gibson, Woodsville, alternate, and Dr. Arthur T. Downing, Littleton, censor.——The eighty-seventh annual meeting of the Center District Medical Society and Merrimack Valley Medical Society was held in Concord January 12. The following officers were elected: President, Dr. John W. Staples, Franklin; vice-president, Dr. Arthur K. Day, Concord; secretary-treasurer, Dr. Pearl T. Haskell, Concord; delegates to the state medical society, Drs. Edmund E. Hill, Suncook, and Sibley G. Morrill, Concord; censors, Drs. Charles H. Dolloff, Concord, Anna M. Littlefield, New London, and Charles H. Quinn, Concord.

NORTH CAROLINA

Fire in Hospital.—The building temporarily occupied as St. Agnes' Hospital for Negroes, Raleigh, was seriously damaged by fire February 3. The 25 patients were all removed without casualty.

Coming Meeting.—The eleventh annual session of the Tri-State Medical Association of the Carolinas and Virginia will be held in Charleston, S. C., February 16 and 17, under the presidency of Dr. Albert Anderson, Raleigh, N. C. Dr. J. Howell Way, Waynesville, N. C., is secretary-treasurer of the association.

Personal.—Dr. Frank H. Russell, Wilmington, examiner in surgery for the North Carolina State Board of Medical Examiners, will locate at Thomasville, Ga.——Dr. Charles H. C. Mills, Charlotte, has returned after several months of postgraduate work in the east.——Drs. John K. Ross, Charlotte, and Julian G. Busby, Spencer, are taking postgraduate work in New York City.

Treatment of Tuberculosis in the City.—A suit of importance to those concerned in the treatment of tuberculosis was heard at Asheville recently, in which the right of a body of Roman Catholic Sisters to maintain a sanatorium for tuberculosis in the residential district of the city was questioned. The point at issue is whether or not residents or property owners of a district can prevent the establishment or maintenance of a tuberculosis sanatorium close to them, on the ground that infection may be communicated thereby. A temporary injunction was granted, and arguments will be heard later in regard to making the injunction permanent.

To Prevent Licensing of Illiterate and Irregular Practitioners.—The legislative committee of the state medical society will make vigorous effort to prevent the proposed licensing of a number of irregular and illiterate practitioners by a special act of the present legislature. It is claimed by the political friends of the irregulars that they will practice in remoter localities where regular practitioners will not care to practice nor reside. This specious argument has been used often with partial success before previous legislatures, especially when the legislative committee of the state society was not on the alert, but it is well understood that the mountainous section of the state is especially well provided with physicians, and that these sections of the state are especially suited for tuberculous patients.

Society Meetings.—At the annual meeting of the Fifth District Medical Society in Fayetteville, January 26, Dr. William T. Pate, Gibson, was elected president, and Drs. Arthur B. Croom, Maxton, and Joseph W. Halford, Chalybeate Springs, were re-elected secretary and treasurer respectively.——At the December session of the Lenoir County Medical Society, held in Kinston, Dr. Claude L. Pridgen, Kinston, was elected president; Dr. J. W. P. Smithwick, La Grange. vice-president; Dr. Albert DeK. Parrott, Kinston, secretary; Dr. Richard W. Wootten, Kinston, treasurer, and Dr. James M. Parrott, Kinston, delegate to the state society.——Wayne County Medical Society, at its annual meeting held in Goldsboro, elected the following officers: President. Dr. R. E. Lee; vice-president, Dr. Theodore L. Ginn; secretary-treasurer, Dr. J. Rainey Parker; delegate to the state society, Dr. Marius E. Robinson; and censors, Drs. William H. H. Cobb, Marius E. Robinson, all of Goldsboro, and Dr. James W. Kornegay, Mount Olive.

NEW JERSEY

Diphtheria Epidemic.—Diphtheria is reported in the State Village for Epileptics, Skillman, where 11 cases have occurred. ——Owing to the prevalence of diphtheria among its nurses, the Mountainside Hospital, Montclair, was temporarily closed January 22.

Abortionist Sentenced.—Dr. Herman A. Glatzmeyer, Newark, is reported to have been convicted of manslaughter in having caused the death of Miss Mary Vliet, Blairstown, Pa., by a criminal operation, and to have been fined $1,000 and sentenced to five years at hard labor in the state prison.

Home for Incurables.—A movement is being made to establish a home for incurables at Atlantic City, to be maintained by private subscription and state appropriation. Drs. Edward Guion, Philip Marvel, W. Blair Stewart, Elisha C. Chew and Milton L. Munson are the medical members of the board of directors.

Personal.—Drs. Edward J. Ill and Charles J. Kipp have resigned as members of the medical staff of the German Hospital, Newark.——Dr. Alvah C. Van Syckle, Hackettstown, has been seriously ill with an infected wound of the hand.——Dr. Isaac N. Griscom has been elected medical inspector of the Ocean City Board of Health.

County Society Election.—At the annual meeting and election of Atantic County Medical Society, held in Atantic City, January 8, the following officers were elected: President, Dr. Clyde M. Fish, Pleasantville; vice-president, Dr. Thomas G. Dunlap; secretary-treasurer, Dr. W. Price Davis; reporter, Dr. Theodore Senseman; censor. Dr. Walter Reynolds, and delegates to the state society, Drs. Arthur E. Ewens and Edward S. Sharpe, all of Atlantic City.

Newark Library of Medicine.—The medical library established by the physicians of Newark is just beginning its fourth year. The members of the medical library association each pay dues of $3, which amounts to nearly $500 annually, and this has been expended in the purchase of the latest medical books and in subscriptions to the medical journals. The library now contains about 500 volumes and also about 200 unbound volumes of the medical journals of the United States and the Continent. The secretary of the association is Dr. Frank W. Pinneo.

Vital Statistics for 1908.—The annual report of the State Board of Health shows that tuberculosis was the most fatal of all diseases in the state, but that the deaths from this cause were not increasing in proportion to the population. Deaths from cancer showed an increase. There were 387 suicides in the state in 1908, an increase of 40 as compared with the previous year, and 65 as compared with the seven years' average. Of the suicides, 142 were by poison, 111 by gunshot wound, 54 by strangulation, 4 by asphyxiation, 18 by cutting instruments and 16 by drowning.

January Mortality.—During the month ended January 15, 3,164 deaths were reported, a decrease of 117 from the corresponding period of last year. Of these, 602 were of infants under 1 year, 267 of children between 1 and 5 years, and 982 of individuals 60 years old or over. Pneumonia, cancer, and suicides show a decided increase. The chief death causes were diseases of the circulatory system, 395; diseases of the nervous system, 380; tuberculosis, 379; pneumonia, 355; diseases of the respiratory system (excepting pneumonia and tuberculosis); 225; nephritis, 205; diphtheria, 65; measles, 33; scarlet fever, 23; typhoid fever and whooping cough, each, 21; and cerebrospinal meningitis, 15.

NEW YORK

Medical Expert Bill.—A bill designed to remedy the evils connected with medical expert testimony, which has been approved by the State Bar Association and the leading medical societies of the state, will be sent to the legislature at once. It is given in the Correspondence Department in this issue.

Personal.—At the last meeting of the trustees of Cornell University, Dr. Graham Lusk was appointed professor of physiology in the medical school. From 1891 to 1898 Dr. Lusk was professor of physiology in the Yale Medical School, and thereafter until the present time he held a similar chair in the University and Bellevue Hospital Medical College.——Dr. A. L. Benedict has resumed practice in Buffalo.

Red Cross Stamp Proceeds.—The Red Cross stamp committee announces that the receipts from the sale of these stamps in New York county were $11.270, of which sum $5.000 is pledged to the Red Cross day camp for tuberculosis patients on the roof of the Vanderbilt Clinic, $1,000 has been given to help defray tne expenses of the Tuberculosis Exhibit at the American Museum of Natural History, and the remainder will be duly assigned to day camp needs.

Physical Defects of Truants.—A recent report of Dr. Frederick J. Mann, inspector of schools of Poughkeepsie, shows that a great majority of truants and of the children who fail of promotion do so because of their physical condition. In the case of the 103 scholars referred for physical defects the total amount of time lost in their school life amounts to 135 years. Of these scholars 15 classed as truants have been retarded 24 years in their school life. Practically every truant he has inspected has had physical defects of the eye, ear or throat.

Release of Insane Patients.—Dr. Robert L. Lamb, superintendent of the Matteawan State Hospital, has collected and classified in his annual report 43 habeas corpus cases. Of these 43 individuals, 27 had committed criminal acts directly against persons, 12 being charged with murder in the first degree. Dr. Lamb recommends some modification of the present law whereby lunatics charged with serious crimes may be dealt with by a tribunal having fixed individual responsibility. Juries are not to be relied on as the findings are universally in favor of the lunatic without regard to his previous history. Dr. Lamb suggests that releases from a hospital should be made in the same way as commitments are now made.

Marriages Decrease.—The statistics of the State Health Department show that there was a marked falling off in the number of mariages during 1908. The number for 1907 was 96,216, and for 1908 only 74.000. This decrease is attributed to the Cobb marriage license law, which went into effect about a year ago. There has been also a lowering of the death rate. The rate was 16.2 per thousand of population, the lowest for a score of years. For the last five years the average death rate was 17.2. Cancer shows a rapid increase as a cause of death. Rochester showed the lowest death rate of any of the larger cities. Schenectady showed a rate lower than 14 per thousand population, which statisticians have said could not be lowered. There has been an increase of births over that of 1907, but provisions have not been made for their accurate recording in all localities.

New York City

Museum of Safety and Sanitation.—Plans are being made along practicable lines to prevent the enormous loss of life and limb through the Museum of Safety and Sanitation, where the safety devices for dangerous machines, and preventable methods of combating dread diseases may be demonstrated. The committee on plan and scope of this work includes Dr. Thomas Darlington, commissioner of the health department of the city.

St. John's Guild.—The annual report of this organization shows that a total of 1,339.214 mothers and children have been cared for during the 42 years the guild has been working. During the summer of 1908 the floating hospital made 49 trips and carried a total of 44.414 women and children. The Seaside Hospital admitted 2.210 women and children during the year. The endowment of the guild now amounts to more than $100,000 and there is $100.000 in the hands of executors which will soon be added to the endowment fund.

Personal.—Dr. William T. Bull has arrived at Wymberly, Ga., where he expects to spend some weeks. He stood the journey well.——Dr. John Winters Brannan, president of the board of trustees of Bellevue and the allied hospitals, whose term had expired, has been reappointed a member of the board.——Dr. William G. MacCallum, professor of pathologic physiology at Johns Hopkins University, has been elected to the faculty of medicine of Columbia University to succeed Dr. T. Mitchell Prudden, who will retire at the end of the present academic year.

Fewer Typhoid Cases.—According to the figures of the New York Health Department, there were during the last year in Manhattan 1,455 cases of typhoid fever, of which 256 resulted fatally, as compared with 2,387 cases and 372 deaths during 1907. Dr. W. L. Hubbard of the department of communicable diseases says that, while the decrease may be only accidental, he is inclined to attribute it to the efforts of the department in spreading information concerning the causes of the disease and the methods of prevention. This information might also make the public more careful in the selection of summer resorts.

Hospital News.—The report of the Volunteer St. Gregory's Hospital, which is under the control of the Salvation Army, shows a deficit for the year of $2,945. During the year 16.302 patients passed through the hospital and 31,409 treatments were given in the dispensary.——A special performance of Faust was given at the Metropolitan Opera-House for the benefit of the French Hospital, at which over $13,000 was realized.——According to the will of Max Freund, Mount Sinai Hospital is to receive $1.000, the Montefiore Home $500, the United Hebrew Charities, $500.——The will of the late Charles Mayer bequeathes the United Hebrew Charities $5,000, Mount Sinai Hospital $3,000, Lebanon Hospital $1,500, Montefiore Hospital $3,000, and the Presbyterian Hospital $1,000.

Course of Lectures.—Columbia University has instituted a course of lectures on sanitary science and public health, to be delivered Mondays and Wednesdays during February, March and April at the College of Physicians and Surgeons. Some subjects have been: February 1, "The Rise and Significance of the Public Health Movement," by Prof. William Thompson Sedgewick, Ph.D., Boston; February 3, "The Great Pathologic Discoveries and their Bearing on Public Health Problems," by Dr. J. George Adami, McGill University; February 8, "Sanitary Science: The Control of Environment," Professor Sedgewick; February 10, "Modes of Transmission and Methods of Prevention of Communicable Diseases," Dr. William Hallock Park, director of the research laboratories of the New York City Health Department.

Lectures on Infant Feeding and Hygiene.—The Association of Physicians of the New York City Milk Depots, a group of twenty-nine practitioners, who are attending to the feeding and instructional work in connection with the milk station of the New York Milk Committee, have arranged the following series of lectures on "Infant Feeding and Infant Hygiene." to be held in the United States Charities Building, 105 East Twenty-second street, during this month, March and April:

"General Principles of Infant Feeding," Dr. Godfrey R. Pisek, February 19.
"Value of Fats in Infant Feeding," Dr. John Howland, March 3.
"Infant Feeding, Its Relation tô Infant Mortality," Dr. Joseph E. Winters, March 13.
"Value of Carbohydrates in Infant Feeding," Dr. Henry D. Chapin, March 26.
"Milk Sanitation," Dr. Rowland G. Freeman, April 14.
"Hygiene of Infancy," Dr. William P. Northrup, April 23.
"Dietary of Children After the First Year," Dr. Linnæus D. LaFetra, April 30.

OHIO.

Postgraduate School.—Youngstown Postgraduate School of Medicine and Surgery has been organized with the object of the furtherance of the work in medicine and surgery, with the following officers: President, Dr. Howard B. Hills; vice-president, Dr. Arba S. Green; secretary-treasurer, Dr. Thomas J. Arundel; professor of anatomy, Dr. John MacCurdy, and assistant professor of anatomy, Dr. Harry McGarvey.

Personal.—Dr. and Mrs. William B. Van Norte, Lima, are spending the winter in Miami, Fla.——Dr. Stirling B. Taylor has been elected health officer of Columbus, vice Dr. Elmer G. Horton.——Dr. J. Morton Howell and Daniel E. Miller, Dayton, are about to take a trip to Hawaii.——Dr. R. C. Stockton Reed is said to be critically ill at the home of his son in Stockton.——Dr. Jesse J. Magruder, Columbus, was operated on for appendicitis January 7.——Dr. Frank E. Kitzmiller, health officer of Piqua, has been appointed local registrar of the State Board of Health.

Elections.—At the annual meeting of the Toledo Academy of Medicine, January 8, Dr. James A. Duncan was elected president; Dr. Walter W. Brand, vice-president; Dr. Charles F. Tenney, secretary; Dr. Lewis F. Smead, treasurer; Dr. Edwin D. Tucker, *financial* secretary, and Dr. Charles N. Smith, censor.——At the annual banquet and election of the Dayton Academy of Medicine, January 11, Dr. Herbert C. Haning was elected president; Dr. Charles H. Tate, vice-president; Dr. Arthur O. Peters, secretary; Dr. Harry S. Patten, treasurer, and Dr. Henry D. Rhinehart, censor.

State Examining Board Meeting.—At the January meeting, in Columbus, the State Board of Medical Examiners revoked the certificate of G. E. Kimber, Toledo, and postponed action on the cases of Pyle and McLaughlin, Canton, charged with advertising in a manner objectionable to the profession, of J. G. Colton, Cleveland, who was sentenced to a term in the workhouse on a charge of misusing the mails, of Dr. Isaac T. Evans, Columbus, alleged to have assisted a private concern in representing that tuberculosis can be cured, and of Dr. L. T. Mahon, Toledo, charged with a similar offense.

Cincinnati

Tag-Day Receipts.—The receipts of "Tag Day" in Cincinnati, January 9, for the benefit of the Day Camp Fund for Tuberculosis, are said to have aggregated $10,000.

Personal.—Dr. Miram Schaar has been made chief of the district nursing under the board of health.——Dr. Albert Faller has been chosen to replace Dr. Benjamin F. Lyle as resident physician and superintendent of the Branch Hospital.

Elections.—At the annual meeting of the Alumni Association of the Medical College of Ohio, January 21, the following officers were elected: President, Dr. Clement C. Fihe; vice-presidents, Drs. William Mithoefer, John P. Miller and Charles T. Souther; secretary, Dr. Sidney Lange, and treasurer, Dr. William H. Streitmann.——At the annual meeting of the Cincinnati Academy of Medicine, held January 4, the following officers were elected: President, Dr. Rufus B. Hall; vice-presidents, Drs. Samuel E. Allen and Edward S. McKee; secretary, Dr. E. Otis Smith; treasurer, Dr. Alexander J. Drury; censor, Dr. John E. Griewe, and librarian, Dr. Arch I. Carson.

OKLAHOMA

Medical Societies.—Alfalfa County Medical Society met at Helena January 19 and elected Dr. Wilson M. Bassett, Jet, president; Dr. Benjamin E. Briscoe, Cherokee, vice-president; Dr. Edward D. Ebright, Carmen, secretary-treasurer; Dr. Jerry E. Vanderpoel, Carmen, censor, and Dr. Thomas A. J. Rhodes, Goltry, delegate to the state society.——Texas County Medical Society, at its annual meeting, held in Guymon January 26, elected Dr. J. M. McMillin, Goodwell, president; Dr. William H. Langston, Guymon, vice-president; Dr. Rutherford B. Hayes, Guymon, secretary-treasurer; and Dr. J. D. F. Gage, Hooker, censor.——Under the direction of Dr. Abraham L. Blesh, Guthrie, district councilor, the physicians of Kay county, on December 10, organized a county society, tributary to, and affiliated with the state and national organizations. Organization was effected by the election of the following officers: Dr. William A. Phillips, Newkirk, president; Dr. Arthur S. Risser, Blackwell, secretary, and Drs. Virgil A. Wood, Blackwell, William M. Johnson, Peckham, and William A. T. Robertson, Ponca, censors. At the annual meeting of the society, held January 14, at Newkirk, the following officers were elected: Dr. Alonzo P. Gearhart, Blackwell, president; Dr. William M. Johnson, Peckham, vice-president; Dr. Arthur S. Risser, Blackwell, secretary; Dr. Otis T. Morey, Ponca, treasurer; Drs. George E. Martin, Newkirk, H. M. Stricklin, Tonkawa, and Edgar J. Orvis, censors, and the president and vice-president, delegates to the state association.——The fourteenth annual session of the Oklahoma Central Medical Association was held in Enid January 12. Dr. Everett S. Lain, Oklahoma City, was elected president; Dr. Arthur B. Cullom, Hennessey, vice-president, and Dr. Edward D. Ebright, Carmen, secretary-treasurer. The next meeting of the association will be held at Oklahoma City in April.——Oklahoma County Medical Society, at its annual meeting in Oklahoma City, elected the following officers: President, Dr. Leander A. Riely; vice-president, Dr. Lewis J. Moorman; secretary-treasurer, Dr. William R. Bevin, and delegates to the state medical association, Drs. Arthur W. White, William T. Salmon, Ross D. Long and Wirt A. Fullington, all of Oklahoma City.——The Atoke-Coal Counties Medical Association, at its annual meeting in Lehigh, elected Dr. Walter B. Wallace, Lehigh, president, and Dr. John B. Clark, Colgate, secretary.——At the second annual meeting of Hughes County Medical Society, held in Holdenville, Dr. Ira W. Robertson, Dustin, was elected president; Dr. James D. Scott, Holdenvile, vice-president; and Dr. Alexander M. Butts, Holdenville, secretary.——Grady County Medical Society met in Chickasha December 7, and elected Dr. Walter Penquite, president; Dr. Paul Vann, vice-president; Dr. Martha J. Bledsoe, secretary, and Dr. James E. Stinson, treasurer, all of Chickasha.

OREGON

Personal.—Dr. Andrew C. Panton, Portland, has resigned as president of the Board of Medical Examiners.——Dr. Albert G. Prill has been re-elected mayor of Scio.

Follows Indiana's Example.—The senate passed February 1, by a two-to-one vote, a bill providing for the sterilization of criminal insane and confirmed criminals. The confirmed criminal is one who has served three or more terms in the penitentiary.

Sentenced for Maintaining Nuisance.—Dr. C. H. and Charles H. T. Atwood, Portland, are said to have been sentenced in the Circuit Court January 21 to five months' imprisonment in the county jail, for maintaining a nuisance in conducting the so-called Atwood Maternity Home. An arrest of judgment was asked but denied.

State Board Election.—At the annual meeting of the State Board of Health the following officers were elected: President, Dr. Edward A. Pierce, Portland; vice-president, Dr. Willis B. Morse, Salem; secretary, Dr. Robert C. Yenney, Portland. A committee was appointed to confer with a committee from the National Association for the Prevention of Tuberculosis in an effort to secure state aid for tubercular poor. The secretary was instructed to enforce the regulations recommended at the recent conference of health officers of the Pacific Coast.

PENNSYLVANIA

Bill to Bar Marriage of Consumptives.—A bill was introduced in the legislature February 3 to stop the marriage of consumptives. The bill is intended to regulate the issuance of marriage licenses and provides the conditions under which such licenses shall be issued. The important feature of the bill is contained in the section which provides that the clerk of the Orphans' Court "shall not issue any marriage license until each of the parties applying therefor shall severally present to the clerk a certificate under oath or affirmation from a medical doctor, duly authorized to practice medicine under the laws of this commonwealth, setting forth that he, the said medical doctor, does declare to the best of his konwledge and belief the applicants for the license are *not afflicted with pulmonary* tuberculosis, epilepsy, insanity, imbecility, idiocy or hereditary diseases, as such would affect the contracting party to such a marriage or any offspring therefrom."

Philadelphia

Fined for Using Bad Eggs.—Charged at the instance of the State Dairy and Food Commission with using bad eggs, known as "rots and spots," in their products, two large baking firms were arrested and fined $62 50 in the magistrate's court.

Personal.—Dr. Alfred Heineberg has been elected gynecologist to the new Lebanon Hospital.——Dr. F. Hirst Maier is confined to his home with a severe pneumococcic infection of the eyes.——Dr. P. Brooke Bland has been seriously ill with septicemia, but is improving.

New Medical Bill Endorsed.—Concerted action by physicians throughout the state supporting the Herbst medical bill, just introduced in the legislature, was planned by the committee on publicity and legislation of the Philadelphia County Medical Society at a meeting February 3. The bill has been endorsed by the county society, the West Philadelphia Physicians' Association, the Northwest Medical Society, the Medico-legal Society, the Medical Examiners' Association, and the South Branch of the County Medical Society. Resolutions were adopted asking the legislative committee of city councils to use its influence to further the passage of the new measure.

FOREIGN

Cholera in St. Petersburg.—The following facts in regard to cholera in St. Petersburg are culled from the reports now appearing in European journals: Of all the capitals of Europe, St. Petersburg has been invaded most often by cholera; it did not escape a single one of the earlier pandemics. The present epidemic in Russia began in 1902, *coming up* through Persia to Southern Russia. In 1904 it extended along the Volga to Seratov. Since then it has persisted in Astrakan and was expected to reach St. Petersburg at any time. Last year it was thought that the danger for St. Petersburg was passing, but this proved to be a mistake. The first cases were *recognized* in the early part of September. In the last half of August a number of cases of so-called summer diarrhea occurred, but the first bacteriologic diagnosis of cholera was made on September 7, when the first death occurred. From September 9 to 19 the number of cases increased rapidly, and on September 19 419 new cases were reported. Since then the number of new cases has steadily diminished. On account of lack of suitable means of transportation and of special hospitals, cholera patients were admitted to the general hospitals; nevertheless there are no reports of cases of hospital infection and no physician has been attacked, but on the other hand several nurses contracted the disease. It appears to be a typical water-borne epidemic. St. Petersburg gets all its drinking water from the Neva; the water reaches the outer borders of the city unfiltered, the inner parts after having been filtered, but only imperfectly so because the filters are overgrown with cholera germs. The Neva is also the principal sewer of the city, receiving all the sewage without previous disinfection. Cholera vibrios have been demonstrated in the water in the center of the river, where there is a considerable current, also closer to the shore, and in numerous canals as well as in the tap water in the bacteriologic laboratories. It seems that the streets were sprinkled with infected water so that ready opportunity was given for contamination of the foodstuffs exposed for sale in the streets. Hence it is quite likely that the larger part of the population has been exposed to infection. The lower classes, however, have been most severely affected; at the same time the better classes have suffered more than usual in cholera epidemics. Numerous healthy persons carrying cholera germs have been encountered, but in all the vibrios are said to have disappeared almost always inside of fourteen days.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, Jan. 30, 1909.

The Royal British Radium Institute

Attention has lately been directed to the great possibilities offered by radium for the treatment of disease. A great obstacle to its more extensive use is its costliness. A number of leading authorities in science and in medicine, with the help of some wealthy philanthropists, have started an institution for the purpose of furthering the use of radium. The movement has enlisted the sympathy of the king, whose keen interest in medical science is so well known. He has shown his approval by granting a royal charter, establishing a Royal British Radium Institute. This institution will not only carry on research work, but will also have a medical department for the eventual treatment of cases in which experimental work has shown the possibilities of radium therapy. Premises have been acquired in the west of London, and the institute will be for the benefit of the rich and poor alike. No similar institute of the kind exists except in Paris. The council includes Sir Frederick Treves, Sir William Ramsay (the scientist), Sir J. J. Thomson of Cambridge University, the Hon. R. J. Strutt and Mr. Henry Morris (president of the Royal College of Surgeons). The work will probably be carried on with the help of the Imperial Cancer Research Fund.

Death Under Stovain

Spinal anesthesia has not yet found much favor in this country, but its use is increasing. Mr. A. J. Barker of University College Hospital has been its foremost exponent, and he has recently reported 100 cases of spinal anesthesia produced by stovain with success. As yet little has been heard of untoward consequences, such as have been reported from time to time in continental journals. Coroner Troutbeck has just held an inquest at Battersea on a house-painter, aged 73, who died while under the influence of stovain. An operation for enlarged prostate was judged necessary, and stovain was injected into the spinal canal between the third and fourth lumbar vertebræ. This anesthetic was selected as the patient had a senile heart and lung trouble, and the drug is supposed not to affect either the heart or lungs. The bladder was then washed out. When the operation was about to begin, the surgeon noticed that the patient's face was very pallid and that he yawned immoderately. The heart and respiration failed and the patient did not respond to stimulation, but died half an hour later. Dr. Freyberger (the pathologist appointed by the coroner to make necropsies for this coroner's inquests) gave as the cause of death anemia of the brain in consequence of failure of the heart under the influence of stovain. He said that he had had two similar cases. The effect of stovain on the heart, he said, was much like cocain.

Death from the Fumes of a Decomposing Cargo

Eleven men employed in removing a cargo of rice and maize out of the holds of the London steamer *Sir John Jackson*, which went ashore on a coral reef near Batticalva on the coast of Ceylon, lost their lives under extraordinary circumstances. They were suffocated by poisonous gases arising from the decomposing cargo. They were suddenly overpowered and fell as if shot. A man employed on deck, who had three brothers at work in the hold, descended to their rescue and lost his life.

Purer Milk for Liverpool Hospitals

In Liverpool an active movement is in progress for securing a purer milk supply for the hospitals. The Liverpool Medical Institution has appointed an influential committee to consider the question. The committee finds that 5 per cent. of the railway-borne milk of Liverpool is so defective on chemical analysis that legal proceedings are taken. On bacteriologic examination 5.4 per cent. of the samples contained tubercle bacilli and 72 per cent. contained organisms commonly present in the excreta of cattle. It was therefore evident that the milk supplied to the Liverpool hospitals was not of the standard desirable for invalids. To remedy this the following suggestions have been made by the committee: 1. Systematic inspection of the farm supplying the milk. 2. Periodical analysis of the milk, both chemical and bacteriologic. 3. The tuberculin test to be applied periodically to the cows. 4. The farm and accessories to be properly equipped. 5. Special milk cans, rain and dust-proof, and capable of being readily sealed to be used. In order to give effect to these suggestions, the committee has recommended that a conference of representatives of the governors and medical boards of the hospitals be invited to meet them. They suggest for the consideration of the conference the desirability of combined action of the hospitals with view of appointing a permanent staff, consisting of chemical and bacteriologic analysts and a veterinary surgeon.

Legislation Regarding the Administration of Anesthetics

The General Medical Council has submitted to the Privy Council a bill making it a penal offense (except under certain specified circumstances) for any person other than a qualified medical practitioner to administer a general anesthetic for any operation or during childbirth. The bill also makes it obligatory on all examining bodies to require that candidates presenting themselves for their final examination shall have received thorough instruction in anesthetics and shall have administered anesthetics under the supervision and to the satisfaction of their teachers.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Jan. 26, 1909.

The Faculty of Medicine and Needed Reforms

The council of the faculty of medicine of Paris commissioned recently a delegation of its members to wait on the minister of public instruction and inform him in detail in regard to the present unbearable situation of the medical departments of the universities and the modifications that this situation demands. In our university organization the council of the faculties of medicine plays a nugatory part; it can pass resolutions but has no power to enforce them. These resolutions are transmitted by the dean to the rector of the university who submits them to the university council or to the superior council of public instruction. But these bodies contain only an infinitesimal proportion of members competent, from a medical standpoint, to pass judgment in the matter. For instance the council of the University of Paris numbers 18 members, of whom only 3 are physicians, while the superior council of public instruction comprises 53 members, of whom 50 are non-medical and 3 are physicians, and of these 3 physicians, 2 are elected by the faculties and the third is appointed by the minister. The faculties are consequently deprived of all initiative. The mistake was made of placing the medical schools on the same basis as the other faculties, forgetting that the former are called on to give at the same time both higher and a technical and professional education.

To remedy the present state of affairs, the council of the faculty of medicine of Paris asks for the creation of a "permanent committee," essentially medical, composed of equal numbers of members respectively nominated by the minister and elected by all the faculties and schools of medicine. This committee is to transmit to the minister directly, after study of the subject, all the resolutions adopted in regard to medical instruction, and to keep him informed of the needs and aspirations of the faculties and schools of medicine. The minister has promised to investigate this matter in a sympathetic spirit.

The Fluctuations of the Population in France

By an interesting innovation the bureau of statistics will henceforth publish the vital statistics in France every six months, instead of yearly. The statistics relating to the first half year of 1908, in comparison with those of the first six months of 1907, have just been published. While the later years have been marked by a constant diminution in the birth rate (see The Journal, Oct. 17, 1908, p. 1346), a notable improvement is seen for the first six months of 1908 in comparison with the same period of 1907. In 1907 the deaths exceeded the births by 55,000 for the first half year; in 1908, on the other hand, the births exceeded the deaths by about 11,000; but it must be noted that the improvement is due especially to the diminution in the number of deaths. There were 457,752 deaths in 1907 to 399,336 in 1908, representing a diminution of about 58,000. The laws of hygiene and of social assistance, which are constantly developing more and more, certainly count for much in this reduction of the death rate. As to the increase of the birth rate proper, it is not very considerable; the number of births of living infants, which for the first half year of 1907 was 402,745, rose during the first half year of 1908 to 411,402, representing an increase of about 9,000. But since these statistics cover only a short period, it is difficult to know whether they represent really an improvement of a durable character or merely a simple and transient fluctuation.

A Decision of the Faculty of Medicine Annulled by the Council of State

The higher authorities have just annulled, on the ground that it was rendered in contravention of the regulations, the decision by which the Paris faculty of medicine in 1906 awarded the Lacaze prize of 10,000 francs ($2,000) to Dr. Achard. This prize is awarded every two years to the author of the best work presented, on the subjects alternately of phthisis and typhoid fever. The stipulations require that the competing works must be in the hands of the secretary before the fifteenth of October. By Oct. 15, 1905, two essays alone had been presented, one by Drs. Lesage and Abrami, the other by Dr. C. Martin. The prize, however, was awarded to neither of these, but to Dr. Achard, who had not formally entered the competition and had not sent in any work to the secretary. The report of the prize committee stated that Achard's candidacy rested on a great number of works, of which many were in collaboration with well-known scientists, the series extending over a period of ten years. Protest against the award of the prize under these conditions was made by Drs. Lesage and Martin, who appealed to the higher authorities. The decree rendered states that the faculty of medicine, through a notice published by its orders and sanctioned by the signature of its dean, made known to the public the conditions under which it would award in 1906 the prize at its disposal. If it was the prerogative of the council of the faculty not to award the prize in case it should consider the merits of the works presented insufficient to justify the award of the prize to their authors, it could not, in defiance of regulations the observation of which was as incumbent on the faculty as on the competitors, bestow the Lacaze prize on Dr. Achard, who had presented no competing work.

Yellow Fever at Martinique

The governor of Martinique has recently cabled the minister for the colonies that a case of yellow fever has developed at Fort-de-France. The chief of the local health service and Dr. Simond, in charge of the commission for study and prophylaxis whose departure from Martinique I recorded in The Journal (Nov. 28, 1908, p. 1879), consider it necessary to postpone the departure of officials and soldiers for Martinique. The governor consequently begs the minister not to embark any one until further orders. Cases of yellow fever have been declared in neighboring foreign colonies, notably at Surinam, where 25 cases, of which 6 proved fatal, have been registered; at Barbados, which has 10 cases with 8 deaths, and at Curacao, where one isolated case has occurred.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, Jan. 11, 1909.

"The Kultusminister"

For some months Holle, the minister of education, has been in Meran on account of an illness attributed by the official reports to nervous breakdown from overwork in familiarizing himself with the work of his new office. He assumed the office about a year and a half ago, having been formerly for many years undersecretary of state in the department of public works. It is indeed a severe task for one unacquainted with its scope to supervise the "Kultus" department, which includes three distinct sections of theology, the entire public school and university system and medical affairs. For many years it has been acknowledged that the scope of this department was too large for a single head, and a movement has been started to effect a subdivision. The chiefs of the department themselves have repeatedly expressed their assent to this suggestion, but the matter has so far always rested there. Physicians have several times expressed a wish that a special state department be created for medical affairs in the same way as is already the case in many civilized countries. There is no question that such a minister would have enough to do in his office, for the extent of affairs pertaining to medicine and the public health is surely very great. But it is with the creation of a new cabinet department as it is with the establishment of a new professorship. In the universities the faculties have every time opposed the establishment of a new regular professorship on the ground that it was not needed, and as a rule every new professorship has been established by the government in opposition to the will of the faculty. In regard to the state departments, there is no superior power to object, but establishment of a new department would entail expense, and for this reason probably the minister of finance, whose vote, it is easy to understand, carries a predominating influence in all affairs involving money, will oppose the innovation. Whether the minister who is ill will return to his duties, is indeed a question, but meanwhile his furlough has been extended. Originally it was assumed that his sickness was the usual "ministerial disease"; that is, it was only to cover up approaching dismissal. This suspicion was increased by the news of a little episode that happened shortly before the beginning of the official's sickness. On the occasion of a meeting with the minister, it is said that the emperor, who was accompanied by the king of Greece, introduced Dr. Holle to his guest with the words, "Herr Holle is now studying to be Kultusminister." In consequence of this unceremonious and somewhat depreciatory personal remark, the minister of education obtained his leave of absence which may terminate with dismissal. Whether this remark was really made is uncertain; the newspapers often spread rumors of such kinds without any foundation. At any rate, it is a fact that the minister is undeniably ill.

Removal of Professor Strümpel to Vienna

Professor Strümpel has received and accepted a call as the successor to Prof. von Schrötter, director of the third medical clinic in Vienna, who died last April. There was some opposition to his selection among the professors of the Vienna medical faculty on the ground that there was enough home talent to fill the vacant position. Protests of this sort are regularly repeated whenever an Austrian professor is called to Germany, or *vice versa.* In general, it is true that each country has sufficient material at its disposal to replace its losses; but quite independently of the facts that each faculty is anxious to improve itself by the selection of the most distinguished professors, and that in carrying out this aim it does not stop at the borders of the neighboring kingdom, the governments of the two countries also desire to introduce "fresh blood" into their faculties by such an exchange. That this view is the right one admits no doubt, for there is a danger for faculties in growing by inbreeding. Hence it is quite desirable that once in a while ability should be introduced that has developed outside of the immediate circle. We have in Germany, especially in Prussia, a number of Austrian professors, such as Kraus in Berlin and the surgeon Payr in Greifswald; on the other hand, Prof. von Noorden went from Prussia to Vienna as the successor of Nothnagel, who was also a German. We have received from Switzerland von Müller in Münich, His in Berlin and Garré in Bonn, while Gerhardt, the son of the renowned internist, has gone from Germany to Basel.

The Feeding of Public School Pupils

The feeding of poor school children is a form of the social helpfulness that is exercised at the present day in most civilized countries, but especially in Germany. In Dresden as early as 1884 a charitable association (*Verein gegen Armennot*) started a "soup kitchen" for poor school children. There has also been in Dresden since 1896 a special association for feeding poor school children with substantial meals. At the present time the public school children are cared for in this way in many German cities, partly by private associations and partly by the city authorities. In Berlin, as I have already told you, 70,000 marks were lately appropriated for this purpose; in Münich there is a municipal soup kitchen which supplies annually 470,000 meals, with a total outlay of 64,000 marks ($15,360); one in Strassburg supplies 108,000 meals at an expense of 13,000 marks ($3,120). In Strassburg the poor authorities have themselves undertaken the entire business of furnishing food to the poor. There is a central kitchen, with kettles holding each 350 liters, which can prepare 2,800 pint bowls of soup. For the distribution of the soup to the local schools, the city and suburbs are divided into districts, and the soup is sent in portable kettles in so-called cooking boxes. The distribution is made partly by volunteer waiters. Augsburg, Charlottenburg, Nuremberg, etc., furnish free milk breakfasts. The selection of the children to be fed is made in most cities by the poor office on the recommendation of the teacher, while in some cities, for instance, in Mannheim, a limit of wages of the head of the family is established. Supplying free meals to the children is not regarded as coming under the head of public charity (*Armenunterstützung*).

Laboratories for Bacteriologic Examinations

At the beginning of this year three official institutions for free bacteriologic examinations were opened in Berlin in the municipal laboratory, in the institute for infectious diseases, and in the hygienic institute of the university. The city is divided into three sections, each of which is connected with one of these laboratories. Examinations are made for diphtheria, meningitis, typhoid, dysentery, anthrax, glanders, trichinosis, and for meat, fish and sausage poisoning. In both of the state institutes examinations are made for tuberculosis. Convenient packages for sending the material can be obtained in the pharmacies, which are marked with the address of the laboratory with which the pharmacy is connected. The charges for sending these packages through the mail must be borne by the sender, and physicians want to have these packages forwarded post free. There is no doubt tha affords a valuable means for the early infectious diseases and for timely prevention of their spread.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, Jan. 29, 1909.

The Work of the Vienna Street Ambulance Corps in Messina

The Vienna Street Ambulance Corps (*Rettungsgesellschaft*) possesses three kitchen-cars or movable kitchens for supplying large quantities of cooked food in special emergencies. These cars are lighted with electricity and fitted with three kettles each, with necessary apparatus for boiling and baking while on the way to the place of need. A storeroom and a pantry are fitted into each car; the three cars can distribute 25,000 rations within eight hours, and no more than three cooks and six assistants are required. When the news of the Messina disaster and the lack of food there became known, the services of the corps and the three portable kitchens were offered to and accepted by the Italian embassy in Vienna. The cars arrived in Messina, Catania and Reggio di Calabria in time to do an enormous amount of good work among the starving population. The only difficulties were, at first, to obtain sufficient food in the ruined towns, and later, to cook it according to Italian taste; but the latter difficulty was soon overcome. In a few days the kitchen-cars were in such working trim that 10,000 or 12,000 people, including the army detachment corps working at the débris, were fed daily, free of charge. The cars are still there; and it is the unanimous opinion that their aid was the succor most gratefully appreciated by the unhappy population. These kitchen-cars have been previously put in service several times after extensive floods and fires, and once during a military maneuver in this country.

New Professors of Dermatology

The death of Professor Mracek and the resignation of Professor Lang have created two vacancies in the faculty of the University of Vienna, which have just been filled by the appointment of Professor Ehrmann to succeed Lang and of Professor Rusch to follow Mracek. Both these men have well-established reputations as diagnosticians and therapeutists; Professor Ehrmann especially is regarded as a very prominent man, full of keen observation, coupled with an intuitive gift for discerning the healing qualities of various substances.

Physical Exercise for School Children

The new regulations for elementary schools give special attention to physical exercise for the children under the supervision of the teachers. Thus on at least three days of each week one hour a day must be devoted to gymnastic exercises, in the open air, if possible, not in the *Turnhalle* or gymnasium. The English system of outdoor games and sports is preferred to the German system of gymnastics. In suitable weather the children are to take short or long walks; on certain days when school is not in session the class is to make excursions to the beautiful places in the environs of the city. Walking is greatly encouraged, and the older pupils are advised to take walking tours during the summer and Christmas vacations, going ten to fifteen miles a day, and doing a moderate amount of mountain climbing. The expenses of the needy pupils are to be defrayed by the schools. Of the gymnastic exercises, especially for the younger children, such as tend to strengthen the lungs are chiefly favored. To be excused from these exercises, a child must produce a medical certificate stating what injury might result to him from taking them. These recommendations are the result of a series of investigations into the physical condition of the school children, instituted by the board of health, and conducted during the last year by a committee of medical men and teachers.

Government Expenditures for Medical Purposes

In the budget for 1909, the government has proposed the expenditure of about $1,100,000 (5,500,000 crowns) for new buildings for the medical faculties in the university cities of Austria, and for the professors' salaries. Vienna is allotted $360,000, Prague $260,000 (there are two universities in Prague), Graz, Lemberg and Innsbruck, each $90,000, and Cracow $120,000. There are to be paid by the state 112 ordinary professors, 57 extraordinary professors, 293 assistants and 76 technical officers; privat docents receive no salary. Buildings are in process of completion for the chemical and physical institute in Vienna, the pharmacologic institute in Prague, the pathologic-anatomic institute in Cracow, as well as a building for forensic medicine; $360,000 were appropriated for these buildings.

Pharmacology

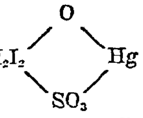
[Contribution from the Chemical Laboratory of the American Medical Association]

THE USE OF MERCURIC IODID SOLUTIONS FOR INTRAMUSCULAR INJECTIONS

W. A. Puckner

In view of the interest in the intramuscular injection of mercury compounds in general, and of mercury sozoiodolate in particular,[1] the result of an examination of a sample of this drug is worthy of comment. Dr. Archibald Church, professor of nervous diseases in Northwestern University Medical School, submitted this sample, stating that it was said to be a solution of mercury sozoiodolate, and that he had had eminently satisfactory results in using it by intramuscular injection.

MERCURY SOZOIODOLATE

The substance sold under this name is said to be the mercury salt of di-iodo-phenol-sulphonic acid, $C_6H_2.OH.I_2.HSO_3$, in which one atom of mercury has replaced the hydrogen of the sulphonic acid group and of the phenol group, yielding the compound of  $C_6H_2I_2\begin{smallmatrix} \diagup O \diagdown \\ \diagdown SO_3 \diagup \end{smallmatrix}Hg$ (L. Rosenthaler, Neue Arzneimittel, p. 110). Theoretically, it should contain 40.67 per cent. iodin and 32.06 per cent. mercury. This mercury compound is said to be insoluble in water, but soluble in solutions of chlorids, bromids or iodids. Examination of a specimen obtained from Merck & Co., indicated that the mercury and iodin content agreed essentially with the theory and its insolubility in water and solubility in a solution of iodids was also confirmed.

SOLUTION MERCURY SOZOIODOLATE

In the solution which was submitted for examination, sodium and mercury were the only metallic elements found. From an estimation of the mercury, the sodium and the iodin contents, it was concluded that 100 c.c. of the solutions contained approximately one gram of mercury sozoiodolate and somewhat less than three grams of sodium iodid. A solution obtained by dissolving one gram of mercury compound in three grams sodium iodid and sufficient water to make 100 c.c. corresponded closely in its chemical behavior and composition to the solution submitted for examination.

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[1] The Journal A. M. A., Sept. 15, 1906, p. 881; Sept. 5, 1908, p. 859; Dec. 5, 1908, p. 1990.

SOLUTION SODIUM MERCURIC IODID

When a mercuric compound is treated with alkali iodids, a complex salt, an alkali mercuric-iodid results (see New and Nonofficial Remedies, 1909, page 94). If a mercurous compound is treated with iodid, some of the mercury is changed to alkali-mercuric iodid, and part is reduced to the metallic state. From this it would seem that when mercury sozoiodolate is dissolved in sodium iodid, the compound is decomposed and the solution contains sodium mercuric iodid. The behavior of the mercury sozoiodolate when in the process of solution appears in every way to confirm this. If this is the case, the question at once arises, why should not mercuric iodid be used in the place of the organic mercury compound, since the efficacy of mercuric iodid has been firmly established? With this in mind, a solution was prepared containing an amount of mercuric iodid approximately equivalent in mercury content to the 1 per cent. mercury sozoiodolate solution, viz.: mercuric iodid 0.8 gm., sodium iodid 3 gm., water sufficient to make 100 c.c. This solution was submitted to Dr. Church, who reports that preliminary trials indicate that the solution possesses all the advantages of the solution of mercury sozoiodolate.

This matter is published in the hope that others who are interested in the subject and who have had unsatisfactory results with other mercury solutions may give this formula a trial:

℞.	gm. or c.c.		
Hydrargyri Iodidi Rubri...............	8		gr. xii
Sodii Iodidi	3	or	gr. xlv
Aquæ	100		f℥ iiiss

The solution may be prepared by any competent pharmacist and the physician will be certain of its mercury content. If this solution is well borne and is therapeutically equal to the solution of mercury sozoiodolate, it again illustrates the frequently demonstrated fact that a complex organic compound is not necessarily superior to a well-known drug of firmly established value. In the case under discussion, physicians have presumed that they were using a new and wonderful mercury compound, when in reality the process of dissolving the drug had decomposed it into the well-known mercuric iodid.

COUGH MEDICINES

The Composition of Some Much Advertised Secret Cough Remedies

In another of its series of articles on "Secret Remedies," the *British Medical Journal*, Dec. 5, 1908, p. 1697, deals with the composition of a few of the most widely advertised cough medicines. The analysis of cough mixtures is not easy, as many of the ingredients used are devoid of definite active principles that can be identified. The formulas, even if they are given, do not necessarily represent the actual ingredients. The discovery of potent remedies, such as preparations of opium, ipecacuanha, etc., is more important and more likely to be successful.

KAY'S LINSEED COMPOUND

According to the analyses, this preparation is fairly represented by ipecacuanha wine, 42 minims; morphin 1/7 grain; chloroform 5 minims in each fluid ounce.

OWBRIDGE'S LUNG TONIC

This much-advertised "patent medicine" is a similar preparation to Kay's Linseed Compound.

POWELL'S BALSAM OF ANISEED

This has been reputed to contain morphin and evidence has been brought to that effect in legal proceedings, but the analyses showed 0.012 per cent. of an alkaloid which was not morphin, although it may have been one of the derivatives of that alkaloid. It is evident that the composition of the remedy has been changed.

DR. KILMER'S INDIAN COUGH CURE

Analysis of this nostrum, which is manufactured in the United States, showed that 100 parts contained 63 parts of solids, of which practically the whole was sugar; there was also present about 2 per cent. of alcohol and about 0.5 per cent, of oil of pine, with rather less than 0.1 per cent. of a resinous substance agreeing well with the resins from compound tincture of benzoin; a small resinous deposit also remained adhering to the inside of the bottle. A trace of a bitter yellowish substance was present, which may have been the aloes contained in the compound tincture, but did not agree perfectly with it in character; the quantity was too minute for exact identification. No alkaloid was present.

CROSBY'S BALSAMIC COUGH ELIXIR

Analysis showed the presence of sugar, a trace of chloroform, sulphuric acid, acetic acid; a trace of an aromatic substance probably derived from tolu, and a minute trace of alkaloid. The sulphuric acid corresponded to 40 minims of the official dilute sulphuric acid in one fluidounce.

VENO'S LIGHTNING COUGH CURE

This "patent medicine" contained glycerin, alcohol and a small amount of resin and no alkaloid was present. There is some reason to believe that the resin is derived from "Grindelia robusta"; but positive proof of the presence of this drug could not be obtained.

KEATING'S COUGH LOZENGES

These were found to correspond approximately to the following formula: Morphin, 0.007 grain; ipecacuanha, 0.07 grain; extract of licorice, 2.1 grains; sugar, 13 grains in one lozenge.

BEECHAM'S COUGH PILLS

The composition of these pills is expressed as follows: Morphin, 0.0035 grain; powdered squill, 0.1 grain; powdered aniseed, 0.3 grain; ammoniacum, 0.3 grain; extract of licorice, 0.4 grain in one pill.

MEDICINE VS. PHARMACY

The Relations Existing Between the Professions

Under the above caption Dr. M. Clayton Thrush, in the *Pharmaceutical Era* (Dec. 24, 1908), details the relations that he believes should exist between the professions of medicine and pharmacy, and he makes suggestions for the removal of differences that have arisen. In discussing the origin of both medicine and pharmacy, Dr. Thrush reminds us that disease used to be looked on as a malign entity, to be driven out of the body by means of noises, odors and contortions. As relics of these primeval beliefs, we still in nervous diseases employ foul-smelling drugs (valerian, asafetida, etc.) and the modern "osteopath" supplies the contortions. After discussing pharmacy from the business side, the problem of popularizing official preparations is dealt with.

POPULARIZING OFFICIAL PREPARATIONS

"The pharmacists of this country are largely to blame for the enormous use of proprietaries instead of official preparations, for if every pharmacist would make up a line of the official drugs, especially the newer preparations of the U. S. Pharmacopeia and National Formulary, and would call on the physicians in the neighborhood and show them these preparations, leaving a sample of each, he would be surprised with the result that would be produced. After all, this is nothing more than his duty as a pharmacist, and he would be doubly rewarded: First, in showing his ability as a pharmacist; second, in encouraging the physician to prescribe official preparations instead of proprietaries; third, in increasing the ties of friendship that should exist between physician and pharmacist."

The question of pharmaceutical legislation is then dealt with, and the pharmacist is urged to belong to his state and national organizations. As for the relation of the physician to the pharmacist and *vice versa*, Dr. Thrush says:

RELATIONS OF PHYSICIAN AND PHARMACIST

"Two things have contributed largely towards harmonizing the two professions, viz.: the work of the Council on Pharmacy of the American Medical Association which is composed of physicians and pharmacists, and the branch meetings in the larger cities of the American Pharmaceutical Association where physicians and pharmacists meet and discuss matters on a common basis. They have done considerable good and their results are being realized throughout the United States."

From the physician's standpoint, the most important causes of lack of harmony between the two professions are: 1. Counter prescribing; 2, incompetency; 3, the indiscriminate renewal of prescriptions against the physician's orders; and, 4, the "pushing" of nostrums. On the other hand:

THE PHARMACIST'S VIEW

"The most important accusation that the pharmacists advance against the physician is the *dispensing of his own medicine*, and this applies chiefly to the compressed tablet and tablet triturate business. Except in the country districts where the physician is compelled by necessity to dispense his own medicines, the physician, according to the pharmacist's ideas, should not dispense, as every time he dispenses means, of course, that much less prescription work for the pharmacist. . . . There are several factors that cause him to commence dispensing. These are important ones that are usually advanced:

"*Competition.*—A young practitioner settles in a certain locality and attempts to write prescriptions for his practice; he soon learns that the other doctors in the vicinity give their medicines with each visit, and in order to compete on the same footing, he is compelled to do as they do. The homeopaths have always furnished their own medicines.

"*Exorbitant prices charged by some druggists.*—Many druggists in attempting to grow rich quickly, charge exorbitant prices for their prescription work and the physician who has prescribed the medicine often suffers as a result.

"*Emergency work, especially at night.*—For emergency work every physician should carry at least a few remedies in a small pocket case or hypodermic outfit.

"*The physician has better control of the patient.*—If he furnishes his own medicine he gives enough to last a certain number of days when the patient returns to him, while, on the other hand, if he writes a prescription the patient can renew it indefinitely and even give it to his neighbors, unless the physician specifies 'not to renew without a written order.'"

VASOGEN AND IODOVASOGEN

Another Case in Which Independent Analyses and Manufacturers' Labels Disagree

Vasogen, a product of Pearson & Company, Hamburg, Germany, has been put on the market under the various designations, "oxygenated vaseline," "water-soluble hydrocarbon" and "oxygenated hydrocarbon." The manufacturers, and also their American agents, Lehn & Fink, claim that by a special process the apparent impossibility of saponifying petrolatum has been overcome with vasogen as the result. Disinterested chemists who have analyzed vasogen find that the product consists essentially of an ammonium soap and petrolatum—practically an ammonia liniment mixed with petrolatum.

Just as petrolatum under its various trade names was at one time recommended as a universal ointment base, so vasogen is recommended promiscuously as a vehicle for remedies applied externally and even for internal medication—needless to say in many cases in which it is directly contraindicated.

Iodovasogen, recommended for external application as a substitute for tincture of iodin, was examined by Zernik in 1905, who found that the iodin existed not as a free iodin, but chiefly as ammonium iodid. The therapeutic character of the preparation is thus entirely different from that to be inferred from the labels and elsewhere, since the counterirritant effects of free iodin are of course absent in ammonium iodid. Pearson & Co. now claim that when Zernik's findings were published they immediately modified their statements on the label in accordance with the truth. This is denied by Dr. Lungwitz, the editor of the *Therapeutische Rundschau* (*Apotheker Zeitung*, 1908, p. 900), who vigorously criticizes the misrepresentation made by Pearson & Co. in regard to iodovasogen. He calls attention to the fact that, while Zernik's results were published over three years ago, the labels which are in use to-day still bear the statement that iodovasogen consists of vasogen 90 parts and resublimed iodin 10 parts, and vasogen 94 parts and resublimed iodin 6 parts, respectively.

As iodovasogen and vasogen in various combinations, are being advertised to the physicians in the United States, the above information from our German exchanges is worthy of consideration.

Nostrums for Diabetes

According to the *British Medical Journal*, Dec. 26, 1908, not many preparations are advertised for the cure of diabetes. Two nostrums of this type were analyzed and, as is usual in such cases, were found to be mixtures of well-known ingredients, none of which can be supposed to produce the wonderful results claimed in the advertisements.

VIN URANÉ PESQUI'S (PESQUI'S URANIUM WINE)

This nostrum proved to be a very ordinary Bordeaux wine each 30 c.c. (1 fluidounce) of which contained uranium equivalent to 0.0055 gm. (1/12 grain) of the nitrate. Although the manufacturers claim that pepsin is added to the wine, no digestive power whatever on egg albumin could be detected.

DILL'S DIABETIC MIXTURE

Analysis of this preparation yielded results indicating the following formula: sodium bicarbonate, 7.4; extract of hydrastis, 1.5; resin, resinoid and other extractives, 2.2; alcohol, 35; water to 100. According to the advertisements this mixture is "the only known remedy for this deadly disease." "The remedy, it is needless to say, will have to be persevered with. These are deadly diseases and must have time." The price is $2 and the estimated cost, 22 cents.

Toxicity of Lysol

To the Editor:—In a pamphlet sent out by Lehn & Fink on lysol, the following statement appears: "Applied to the surface in full strength, no injury results." This statement I believe to be incorrect. Early this year, having a patient with an infected finger, I gave directions for a moist dressing of a solution of lysol. The patient applied the lysol full strength on a gauze compress. The result was severe burning pain, and although the press was removed within an hour, sloughing of the skin followed over the entire surface of the finger covered by the compress. I called the attention of a representative of the company to the inaccuracy of the firm's statement, but no change has been made. I wish the readers of The Journal to profit by my experience.

C. D. Harrington, Minneapolis.

Comment.—Extravagance and exaggeration of statement are characteristic of most proprietary promoters, and constitute one of the worst evils of the proprietary medicine business, for physicians no less than laymen are misled thereby. The power of phenol (carbolic acid) to cause gangrene is well known and the cresols—of which lysol contains 50 per cent.—have in general the properties of the phenols. Lysol has taken the place of phenol (carbolic acid) as a means of suicide in Germany, where until lately it has been more easily procured than carbolic acid. The effects of undiluted lysol on the stomach are those of a corrosive poison and similar effects may be expected on the external surface of the body in cases in which the skin does not form an efficient protection. The statement of the circular is unwarranted and the moral, if not the legal, responsibility for the untoward consequences resulting therefrom lies at the door of those making it. If, instead of the patient, our correspondent had ventured on the strength of the advertisement to recommend the application of the preparation undiluted, he might perhaps have been made a party to a malpractice suit, and he would not be able to throw the responsibility on the manufacturer who made the statement.

Correspondence

Bill Affecting Expert Testimony in New York State

To the Editor:—I enclose herewith a true copy of the proposed bill affecting expert testimony, which was recently adopted by the Medical Society of the State of New York on the report of the committee appointed one year ago to act with a similar committee appointed by the New York State Bar Association. The committee of the bar association after joint session with our committee recommended to the state bar association its adoption. It was adopted unanimously after free discussion and it is now ready to be introduced into the legislature of this state.

The committee of the Medical Society of the State of New York desires the cooperation of the medical profession and the journals representing the medical thought of this country. The committee believes that the time is ripe for a determined effort to be made, having for its object the stamping out of the almost intolerable conditions surrounding expert evidence today. The active cooperation of the bar of this state is now assured.

There is no doubt but that some members of the bar, and possibly some members of the medical fraternity, will be opposed to the adoption by the legislature of this method or any other looking toward improvement in the present conditions surrounding medical expert testimony.

It is possible that this bill is not perfect. We know that there are several things that could be added to it in order to make it a perfect bill, but we do not believe that a complicated measure can be made a law.

The enclosed bill is simple and concise and there is no opportunity of mistaking its provisions.

Owing to a mistake of the associated press representative the wrong bill was published in the daily papers as being the one adopted by the Medical Society of the State of New York and the New York State Bar Association.

We ask that the matter be taken up in The Journal and given the benefit of editorial cooperation on this subject.

Dwight H. Muncy.
Chairman Committee on Expert Testimony of the Medical Society of the State of New York.

An Act to Regulate the Introduction of Medical Expert Testimony

The people of the State of New York, represented in Senate and Assembly, do enact as follows:

Section I. Within ninety days after this act shall take effect the justices of the supreme court assigned to the appellate division thereof in the several departments, shall designate at least ten and not more than sixty physicans in each judicial district who may be called as medical expert witnesses by the trial court or by any party to a civil or criminal action in any of the courts of this state, and who when so called shall testify and be subject to full examination and cross-examination as other witnesses are. Any designation may at any time be revoked without notice or cause shewn, and any vacancy may at any time be filled by the justices sitting in the appellate division.

Sec. II. When so directed by the trial court witnesses so called shall receive for their services and attendance such sums as the presiding judge may allow, to be at once paid by the treasurer or other fiscal officer of the county in which the trial is had.

Sec. III. This act shall not be construed as limiting the right of parties to call other expert witnesses as heretofore.

Sec. IV. This act shall take effect Sept. 1, 1909.

Impressions of America.—Many foreign exchanges publish articles by scientists who had attended the International Tuberculosis Congress at Washington. Krause (*Med. Klinik*, January 10) remarks that he never heard so many fine and witty dinner speeches as at the various banquets he attended. He deplores the ice-cold beverages. Even the physicians drank them. "No wonder," he adds, "that there are so many dyspeptics in America." He cast an envious eye on the university ball grounds, gymnasium and swimming tank at Philadelphia. He remarks that the measures adopted against tuberculosis in this country do not differ materially from those in vogue in Europe, but that Biggs' arrangements for notification of cases of tuberculosis (New York) are absolutely ideal, and he wishes that German cities had such a faultlessly working institution.

Queries and Minor Notes

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

THE PATIENT'S RIGHT TO CHANGE HIS PHYSICIAN

To the Editor:—A few weeks ago a well-known neurologist saw a case of paralysis agitans with me in consultation, and we agreed on a line of treatment which I at once instituted. By chance I met the consultant at a medical dinner, recently, and he informed me that my patient had consulted him that day and that he had given the patient some medicine to overcome melancholia. 1. Does a consultant act within ethical rules when he advises a patient without first attempting to reach the attending physician? 2. Does the fact that the patient prefers the consultant to his former physician relieve the consultant from all suspicion of hunting on the preserves of the general practitioner? My experience has been, during the past twenty-five years, that consultants have very elastic consciences.

Inquirer, Chicago.

Answer.—1. Assuming the facts to be as stated, the consultant did wrong in prescribing for the patient without either (1) a consultation with the attending physician; (2) a request or permission from that physician to do so; or (3) an express statement from the patient that he had notified his former physician of his intention of placing himself in future entirely under the care of the consultant. In the absence of such assurance, medical advice (save in a dangerous emergency, such as does not appear on the face of the evidence in this case) should have been refused until after that course had been adopted.

2. As to the suspicion that such a transfer necessarily implies a "hunting by the consultant on the preserves of the general practitioner," it may be remarked that to suppose that, because a patient transfers his allegiance, he must necessarily have been unduly influenced by the one to whom he transfers it, is to credit human beings with less initiative of their own than they usually possess. Moreover exception must be taken to the idea involved in the expression "the preserves of the general practitioner." So far as the patient is concerned, it must be remembered that he has a right to change his physician as often as he pleases for any reason, good, bad or indifferent, or even for no reason at all, provided only that he is frank about it with his previous physician. It is, however, an obligation on every honorable physician, when consulted under such circumstances, to ascertain whether such a frank and courteous notice of withdrawal has been given to the attending physician, and in default thereof, to insist on that course being taken prior to taking charge of the case.

The fact that the former patient "prefers the consultant to his former physician," of course can not "relieve the consultant from suspicion" of unfair procedure, but neither is it *per se* justifiable ground for arousing it. Every act of every individual may arouse, on the part of those prone to suspect, a suspicion of improper motives. The real question is, what reasonable grounds exist for such suspicion? These must be one or both of the following: (1) Knowledge as to the disloyal character, generally, of the person suspected; (2) knowledge of circumstances tending to show that the action suspected actually took place. In the absence of one of these factors there should not exist, in a right-minded person, any suspicion requiring to be relieved.

PRACTICAL BOOKS ON UP-TO-DATE BACTERIOLOGY

To the Editor:—In these days of the making of books it is not often that the general practitioner has a chance to ask for more or for a new kind, and yet I believe that there is a serious lack of works on a very important subject—vaccine therapy; and this has come about from the rapid rise of interest in this form of treatment. The book needed is a clinical bacteriology; one that will tell briefly the identity of the one or more varieties of microorganisms which commonly produce the various forms of disease we are called every day to treat. Suppose, for example, I wish to treat a case of bronchopneumonia, or of suppuration of the middle ear, by the vaccine method; I am at a loss to know what vaccine to use, and even when I am prepared to make a vaccine from the flora found in the sputum or discharge, I do not know which of the various organisms present is the principal offender.

If such a book exists I shall be glad to hear of it, and I feel sure that there are others in the same position as I find myself in this matter.

Henry Power, Spokane, Wash.

HYPEREMIA IN GYNECOLOGY

To the Editor:—In Dr. Arthur Stein's article on the above subject (The Journal A. M. A., Jan. 23, 1909), he says: "In such cases it is best to stop the treatment and try to bring about an absorption of the pus by other means." Later he says: "Pus when present must always be evacuated by surgical means." I fancy the readers of Dr. Stein's article will acquire a very hazy idea of what he considers the proper method of handling pus in the pelvis. I suspect that his attitude is a soundly scientific one, but he is self contradictory in his article May I ask for enlightenment? Pus in the pelvis is a very important condition and not to be considered lightly or in an off hand fashion My own views as to dealing with such conditions are pretty well crystallized but the general practitioner's notions are not likely to be very definite if he is handed out loosely constructed literature on the subject

G FRANK LYDSTON, M D, Chicago

[Proof of the above was submitted to Dr Stein, who replies as follows]

It is to be regretted that this is another instance in which individual sentences have been selected to prove just what the author does not mean That the writer of the above may obtain the enlightenment he requests I beg of him to reread the entire paragraph from which he has quoted In the sentence preceding the one mentioned I spoke of 'an old encapsulation of pus somewhere in the inflammatory process *one that has not been detected by the finger of the examiner*" I do not believe that there can be any possibility of a misunderstanding as I spoke only of old chronic suppurative inflammations where, as experience proves surgical interference is not indicated These are the cases in which even after repeated probatory puncture one may only obtain a few drops of a thick and usually sterile pus Such cases are universally treated conservatively If in the same paragraph I suggested following the old surgical adage, 'ubi pus ibi evacua" I depended on the reader's intelligence still to remember the beginning of the paragraph and the words 'not been detected" On the other hand, when a fluctuating abscess is distinctly felt, one would naturally incise and drain without hesitation

BOOKS ON HYPNOTISM, SUGGESTION AND PSYCHOTHERAPY

To the Editor —Please give me a list of authoritative books on hypnotism and suggestion J E B ZIEGLER, Baltimore

ANSWER —A list of the more important works on hypnotism and mental suggestion was published in THE JOURNAL, Feb 29, 1908, p 710 To this list may be added the following

Tucker, C L Hypnotic Suggestion' G P Putnam's Sons, New York $2 00

Mason, O Hypnotism and Suggestion" H Holt, 29 W. Twenty third St, New York $1 50

Moll A 'Hypnotism' Charles Scribner's Sons, New York $1 50

Emmanuel Movement 'Religion and Medicine The Moral Control of Nervous Disorders,' Worcester, McComb and Coriat Moffat, Yard & Co, New York $1 50

Any one seriously taking up the study of mental therapeutics should certainly read the last named book, altogether independently of his views on this much discussed movement In addition to the foregoing the following articles may prove of assistance

Barker, L F 'Psychotherapy," THE JOURNAL, Aug 1, 1908, p 368

Edes, R T 'Present Relations of Psychotherapy," THE JOURNAL, Jan 9, 1909, p 92

Achorn, J W 'Habit Cure, Mental and Physical," *Boston Medical and Surgical Journal*, Aug 22, 1907, p 260

Mills, C K 'Psychotherapy, Its Scope and Limitations' *Monthly Cyclopedia and Monthly Bulletin*, July 1908

Scripture, E W "Detection of Emotions by the Galvanometer,' THE JOURNAL, April 11, 1908, p 1164

Scripture, E W "Experiments on Subconscious Ideas" THE JOURNAL, Feb 16, 1908 p 521

A working knowledge of the methods of modern psychology forms a good groundwork for the study of suggestive therapy A useful book on this subject is 'Thinking, Feeling, Doing by E W Scripture, G P Putnam's Sons, New York, 1907

INJURY TO EYE FROM TUBERCULIN REACTION

To the Editor —Please cite references to literature giving instances in which the eye was permanently injured as a result of using tuberculin in the ophthalmic reaction

F P CALHOUN, M D, Atlanta, Ga

ANSWER —The following articles may be referred to, as giving cases of permanent injury or extremely severe reaction

Clark C P THE JOURNAL A M A, June 20 1908 p 2061 (gives a summary of cases in which severe reaction occurred)

Collin, R Drawbacks and Dangers of the Ocular Tuberculin Reaction *Med Klin*, Feb 2 1908

Delorme (in discussion on Calmette's paper) *Bull de l Acad de med*, lxxii Jan 21, 1908

Eisen P *Beitr z Klin d Tuberl*, 1907, viii 4

Leer F *Munchen med Wchnschr* Jan 7, 1908

Goerlich M Is the Conjunctival Reaction Free from Danger? *Munchen med Wchnschr*, June 30 1908

Kalt, M *Ophthalmos opc* Dec 1, 1907

Napier, A *Glasgow Med Jour*, January, 1908

Rosenau, M J, and Anderson, J F · The Ocular Reaction to Tuberculin A Warning, THE JOURNAL A M A, March 21, 1908, L, 961

Satterlee, E R · THE JOURNAL A M A, June 27, 1908, L, 2133

Torok Ophth Sect N Y Acad Med, May 19, 1908

Trousseau *Jour de med et de chir prat*, Jan 10, 1908

Von Durme and Stocke *Presse med*, March 14, 1908

Weber, F P *Deutsch med Wchnschr*, Feb 20, 1908, xxxiv, No 8

Webster and Kilpatrick *Brit Med Jour*, Dec 7, 1907

Wiens and Gunther. *Munchen med Wchnschr*, Dec 24, 1907

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U S Army, week ending Feb 6 1909

Hoff, J VanR, col, ordered, upon expiration of present leave of absence to Chicago, Ill, for duty as chief surgeon Department of the Lakes

Rand, I W major, ordered to duty at Fort DuPont, Del, on arrival in the United States

Carter, E C lt col, ordered to Chicago for temporary duty as chief surgeon, Department of the Lakes

Banister J M lt col ordered to Omaha for temporary duty as chief surgeon, Department of the Missouri

Persons E L capt, granted leave of absence for seven days

Cox Walter Bispham, W N, capts relieved from duty in Philippines Division in time to sail April 15 for San Francisco

Whitcomb, C C capt, granted leave of absence for four months on arrival in United States from Cuba

Van Dusen J W, capt, relieved from duty at Fort Crook, Neb, and ordered to Fort Riley, Kan for duty

Field J B major, ordered to Fort McDowell, Cal, for duty on return from Cuba with troops

Duval, D P major, ordered to Fort Sill, Okla, for duty on return from Cuba with troops

Hess L T, major, ordered to Fort Leavenworth, Kan, for duty on return from Cuba with troops

Gilchrist H L, major, ordered to Fort Omaha, Neb, for duty on return from Cuba with troops

Shook, J R, capt, ordered to Chicago for duty as attending surgeon on return from Cuba with troops

Bartlett, C J, capt, ordered to Fort Andrews, Mass, for duty on return from Cuba with troops

Truby, W F, major, ordered to Fort Bayard N M, for duty at the Army General Hospital, on return from Cuba with troops

Murray Alex capt relieved from duty with the Isthmian Canal Commission granted leave of absence for three months

Blanchard R M, capt, ordered to accompany troops from Fort Sheridan, Ill, to San Francisco

Thomason, H D, capt, granted leave of absence for one month

Navy Changes

Changes in the Medical Corps, U S Navy, for the week ending Feb 6, 1909

Nash, F S, surgeon detached from the Naval Academy and ordered home to wait orders

Dessez, P T, P A surgeon, ordered to the *Denver*

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine Hospital Service for the seven days ended Feb 3, 1909

Stoner, G W surgeon, granted 2 days leave of absence from Jan 29 1909 under paragraph 189 Service Regulations

Wertenbaker C P, surgeon, directed to proceed to Raleigh, N C, on special temporary duty

Nydegger, James A, P A surgeon directed to proceed to Washington, D C, and report to chairman of board of medical examiners to determine his fitness for promotion to the grade of surgeon

Warren B S P A surgeon, granted 10 days leave of absence from Jan 27 1909

Salmon Thomas W P A surgeon, granted 30 days' leave of absence from Feb 1, 1909

Marshall F R asst surgeon, granted 2 days' leave of absence from Feb 11 1909

Preble Paul asst surgeon, granted 73 days' leave of absence from Oct 26 1908 on account of sickness

Kastle Joseph H chief division chemistry hygienic laboratory, granted 11 days extension of leave of absence from Jan 2 1909, on account of sickness

BOARD CONVENED

Board of medical officers convened to meet at the bureau Feb 1, 1909 for the examination of P A Surgeon James A Nydegger, to determine his fitness for promotion to the grade of surgeon Detail for the board Assistant Surgeon General W J Pettus chairman, Assistant Surgeon General J M Eager, Surgeon W P McIntosh, recorder

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine Hospital Service during the week ended Feb 5, 1909·

SMALLPOX—UNITED STATES

Alabama Mobile, Jan 16 23 1 case, imported, Mobile county, Jan 31, 7 cases

California Los Angeles Jan 9 16 2 cases.

Illinois Danville Jan 17 24, 1 case

Indiana: Elkhart, Jan. 16-23, 2 cases; Fort Wayne, Jan. 9-16, 1 case; Indianapolis, Jan. 17-24, 1 case; *Lafayette, Jan. 18-25*, 2 (9) cases.

Kansas: Kansas City, Jan. 16-23, 1 case; Topeka, Jan. 9-23, 15 cases.

Kentucky: Covington, Jan. 16-23, 2 cases; *Lexington, Jan.* 16-23, 6 cases.

Louisiana: New *Orleans, Jan.* 16-23, 1 case; Shreveport, Jan. 1-20, 32 cases, 1 death.

Maine: Van Buren, Jan. 16-23, 8 cases.

Maryland: Baltimore. Jan. 31, 1 case, imported.

Minnesota: Duluth, Jan. 14-21, 1 case, imported.

Ohio: Cincinnati, Jan. 8-22, 49 cases, 1 death; Tiffin, Jan. 16-23, 1 case.

Pennsylvania: Harrisburg, Dec. 18-29, 3 cases.

Tennessee: Nashville. Jan. 16-23, 6 cases.

Texas: Laredo, Feb. 4, 1 case; San Antonio, Jan. 16-23, 4 cases.

Virginia: Lynchburg, Jan. 16-23, 1 case.

Washington: Tacoma, Jan. 3-17, 17 cases.

Wisconsin: La Crosse, Jan. 16-23, 3 cases; Manitowoc, 1 case; Milwaukee, Jan. 9-23, 40 cases.

SMALLPOX—FOREIGN

Australia: New Castle., Nov. 23-30, 1 case.

Brazil: Para, Dec. 26-Jan. 9, 2 cases, 3 deaths; Rio de Janeiro, Dec. 13-27, 253 cases, 111 deaths.

Canada: Halifax, Jan. 9-16, 4 cases; Hamilton, Jan. 16-23, 1 case.

Chile: Talcaguana, Jan. 2, present.

China: Amoy, Dec. 12-19, present; Shanghai, Dec. 5-12, 2 cases.

Greece: Athens, Dec. 26-Jan. 2, 1 death.

India: Bombay, Dec. 22-29, 4 deaths; Calcutta, Dec. 5-12, 6 deaths; Rangoon, Dec. 12-19, 1 case.

Indo-China: Saigon, Dec. 1-19, 4 cases, 2 deaths.

Italy: General, Dec. 27-Jan. 10, 19 cases.

Mexico: Monterey, Jan. 10-17, 1 death; Veracruz, Jan. 2-9, 1 case.

Netherlands, The: Rotterdam, Jan. 9-16, 1 case.

New Foundland: St. Johns: Jan. 16-23, 1 case, vessel.

Peru: Lima, Dec. 24, 8 cases. in Lazaretto.

Russia: Moscow, Dec. 9-16, 13 cases, 7 deaths.

Siberia: Vladivostok, Dec. 13-20, 1 case.

Spain: Valencia, Dec. 26-Jan. 9, 7 cases; Viga, Dec. 26-Jan. 2, 2 cases.

Turkey: Constantinople, Dec. 27-Jan. 10, 8 deaths.

YELLOW FEVER

Brazil: Bahia, Feb. 1, epidemic; Manaos, Dec. 12-19, 1 death.

Dutch Guiana: Paramaribo, Dec. 18-Jan. 2, 21 cases, 6 deaths.

Mexico: *Merida, Jan. 9-16, 2 cases*; San Bernardino, vicinity of Mexcanu, Jan. 9-16.

CHOLERA

India: Bombay, Dec. 22-29, 18 deaths; Calcutta, Dec. 5-12, 10 deaths.

Russia: St. Petersburg, Jan. 13-15, 67 cases, 22 deaths.

PLAGUE

Brazil: Bahia, Feb. 1, epidemic; Rio de Janeiro, Dec. 11-27, 15 cases, 9 deaths.

Chile: Iquique, Dec. 28, 1 case.

India: General, Dec. 12-19, 2,449 cases, 1,788 deaths; Bombay, Dec. 22-29, 4 deaths; Calcutta, Dec. 5-12, 9 deaths; Rangoon, Dec. 12-19.

Peru: General, Dec. 18-24, 30 cases, 20 *deaths*; *Callao*, Dec. 24-Jan. 2, 2 cases, 1 death; Lima, 3 cases, 2 deaths.

Association News

NEW MEMBERS

List of new members of the American Medical Association for the month of January, 1909:

ALABAMA

Atwood. A. L., Birmingham.
Batson, D. C., Gants Quarry.
Clements, H. C., Benton.
Frazier, Alfred S., Thomaston.
Rucker, Jr., E. W., Birmingham.

ARIZONA

Alexander, R. L., Tempe.
Armstrong, J. J. P., Douglas.
Bechtel, A. D., Tucson.

ARKANSAS.

Biggs, Orvis E., Hot Springs.

CALIFORNIA

Campbell, G. E., Pasadena.
Hanlon, Edward W., Los Angeles.
Stephens, J. M., San Francisco.
Thompson, C. E., Dunsmuir.
Whitney, Jas. L., San Francisco.
Zelinsky, Frank, Los Angeles.

COLORADO

Blickensderfer, G. M., Denver.
Engelson, C. J., Denver.

CONNECTICUT

Rindge, Milo P., Madison.

DISTRICT OF COLUMBIA

Briggs, John B., Washington.
Callan, C. V. N., Washington.

FLORIDA

Denton, Jno. Thomas, Sanford.
Holden, Gerry R., Jacksonville.

GEORGIA

DuPree, D. H., Athens.

ILLINOIS

Aimone, John, Granville.
Cleminson, *Haldane*, Chicago.
Connell, Jas. A., No. Chicago.
Davis, Charles L., Robinson.
Dudley, Gerry B., Charleston.
Fair, F. F., Chicago.
Fischmann, E. W., Chicago.
Friesen, J. Frank, Chicago.
Hamilton, D. S., Chicago.
Lowenthal, Louis, Chicago.
Manning, Leonard, Chicago.
Oughton, Jas. H., Dwight.
Toner, T. J., Chicago.
Willits, I. R., Chicago.
Wyant, A. R. E., Chicago.

INDIANA

Allin, Jno. H., Corunna, Ind.
Carter, Jas. H., Seymour.
Elrod, S. B., Henryville.
Emmick, T. C., Mt. Vernon.
Glackman, J. C., Hatfield.
Lawson, W. T., Danville.
Lindenmuth, E. Oscar, Indianapolis.
Merz, Henry G., Ft. Wayne.
Murphy, N. W., *Poseyville.*
Nusbaum, Jay D., Auburn.
Small, Emery F., Decker.
Spilman, F. J., Connersville.
Staley, T. M., *Bicknell.*
Varble, W. *Marshall, Gary.*
Willis, J. *Herbert*, Evansville.
Wilson, Dalton, Yankeetown.

IOWA

Boyd, Frank E., Colfax.
Glann, R. C., Bronson.
Limburg, J. I., Farley.
McConkie, W. A., Cedar Rapids.
McDowell, W. O., Grundy Center.

KANSAS

Davis, J. T., Independence.
Edwards, J. B., Chanute.
Holt, T. T., Geuda Springs.
Hudiburg, Walter S., Independence.
James, R. W., Winfield.
Kackley, L. B., Parsons.
Parrington, J. M., Emporia.
Rader, J. A., Caney.

KENTUCKY

Buntin, H. H., Carlisle.
Durrum, A. H., *Myers.*
Harper, J. H., Gimlet.
Hart, P. A., Murray.
Haston, Fred D., Kim.
Helms, Jas. E., Louisville.
Humphrey, P. S., Ashland.
Hunter, Sylvester G., Sandy Hook.
Malkin, G. Morris, Louisville.
Meredith, H. M., Scottsville.
Muster, B. A., Lyons.
Nolan, J. W., Holland.
Brennan, J. A. O., Louisville.
Rosenham, C. J., Louisville.
Sutton, K. P., Lewisburg.
Swango, S. S., Valeria.
Threlkeld, R. L., Louisville.
Whitlow, E. A., Scottsville.

LOUISIANA

Boaz, T. D., Juanita.
Knoefel, *William R., Bonita.*
Talbot, Paul G., New Orleans.

MAINE

Allen, George A., Lovell.
Floyd, A. E., E. Machias.
Loughlin, J. W., Round Pond.

MARYLAND

Bernheim, B. M., Baltimore.
Buxton, *G. F., Baltimore.*
Glantz, Frank A., Baltimore.
Hoopes, Fannie C., Baltimore.
Hyde, Harry C., *Baltimore.*
Koon, T. W., Cumberland.
Landers, A. E., Crumpton.
Love, Wiliam S., *Baltimore.*
McAvoy, M. J., Baltimore.
Muse, B. P., Baltimore.
Stabler, Augustus, Brighton.

MASSACHUSETTS

Barry, J. H., Boston.
Creeley, O. S., Watertown.
Harris, L. W., Malden.
Lancaster, W. B., Amherst.
Wells, Frank, Boston.
Young, W. H., E. Dedham.

MICHIGAN

Butler, S. A., Pontiac.
Dumbauld, *D. F., Blissfield.*
Eastman, C. W., Three Oaks.
Emerson, Enoch, Spring Arbor
Hancock, *E. E., Coldwater.*
Hodges, Lewis S., Tekonsha.
Hoyt, W. F., Paw Paw.
Hungerford, P. R., Concord.
Kar, H. S., Winona.
Knapp, H. D., Linden.
Lackie, D. J., Grindstone City.
McAlpine, A. D., Detroit.
McCue, Christopher, Goodells.
Metcalf, A. A., Hancock.
Mitchell, James, Gladstone.
More, George W., Ionia.
Peterson, E. S., Jackson.
Royer, W. A., Mendon.
Scoville, B. P., Constantine.
Spicer, W. E., Jackson.
Springer, Menno, St. James B. I.
Strahan, D. H., Pewamo.
Sugnet, W. J., Gagetown.
Van Antwerp, S. C., Vicksburg.
Weeks, Robert E., Augusta.
Wiggers, Carl J., Ann Arbor.
Winchell, G. P., Ionia.

MINNESOTA

Gordon, David, Albert Lea.
Johnson, H. Amanda, Minneapolis.
Kusske, A. L., Sanborn.
MacDonald, I. C., Minneapolis.
Magnusson, H. V., Minneapolis.
McEachran, A., Minneapolis.
Weiser, G. B., New Ulm.

MISSISSIPPI

Longino, J. G., Jonestown.
Martin, L. H., Hattiesburg.
Weissinger, A. J., Hernando.

MISSOURI

Ambrose, O. A., St. Louis.
Bonnot, Edmond, St. Louis.
Boyd, J. R., Springfield.
Brown, George S., Edina.
Bruce, J. R., Marshfield.
Bunch, R. J., St. Louis.
Calhoun, J. G., St. Louis.
Fischer, W. E., St. Louis.
Grimes, Marvin, Hardin.
Mayfield, M. H., Springfield.
Oehler, E. F., St. Louis.
O'Reilly, J. A., St. Louis.
Rotter, C. F., St. Louis.
Thompson, G. R., St. Joseph.
Vandivert, A. H., Bethany.
Wentker, B. P., *St. Charles.*

MONTANA

Buchen, F. E., Hamilton.
Clancy, D. F., Virginia City.

NEBRASKA

Detwiler, A. K., Omaha.
Stewart, *Alfred* J., Mitchell.

NEVADA

Rhyan, W. W., Goldfield.

NEW JERSEY

Barber, Isaac, Phillipsburg.
Davis, L. R., Newark.
Emory, G. B., Newark.
Parry, Edward, Camden.
Stinson, *Richard, Paterson.*
Sullivan, M. J., Englewood.
Ward, L. A., Camden.

NEW MEXICO

Priest, Howard, Fort Bayard.
Sunderland, W. E., *Estancia.*

NEW YORK

Adams, J. L., New York City.
Benjamin, W. C., Almond.
Berk, A. B., New York City.
Bowerman, E. A., Buffalo.
Buck, Francis D., New York City.
Castelli, Alfonso, New York City.
Druskin, S. J., New York City.
Fitzgerald, F. J. C., New York City.
Fried, G. A., New York City.
Graney, Charles D., LeRoy.
Hubbell, G. L., Hobart.
Keeler, J. W., Jr., Hammondsport.
Kepke, John, Brooklyn.
Noehren, A. H., Buffalo.
North, C. E., New York City.
Orchard, N. G., Rochester.
Potter, Alfred, Brooklyn.
Prentiss, R. N., Brooklyn.
Pumyea, P. C., New York City.
Rogers, E. H., New York City.
Rosanoff, A. J., Kings Park.
Schoenenberger, F. J., New York City.
Stoup, R. J., Syracuse.
Walker, H. D., Buffalo.

OHIO

Austin, Mary L., Gallipolis.
Bachman, U. M., Cleveland.
Bode, Mildred J., Cincinnati.
Bruening, A. H., Cleveland.
Crawford, G. M., Lorain.
Gunsolly, William N., Cleveland.
Heberding, John, Youngstown.
Ireland, William E., Washington C. H.
Hunt, M. L., Akron.
Knoop, E. T., Cincinnati.
Krause, C. R., Cleveland.
Moore, Jesse M., Cleveland.
Wheatley, W. E., Lorain.
Townsend, C. E., Steece.

OKLAHOMA

Austin, J. L., Durant.
Byrum, James M., Shawnee.
Graves, William C., McAlester.
Ogden, William H., McAlester.
Reeves,W. B., Wapanucka.
Smith, J. B., Durant.
Swearingin, C. H., Hugo.
Wallace, W. J., Oklahoma City.
Weir, M. W., Oklahoma City.
Welsh, S. H., Dacoma.

OREGON

McArthur, J. H., Portland.

PENNSYLVANIA

Atkins, G. H., Philadelphia.
Balsinger, W. E., New Castle.

Blakeslee, W. H., Philadelphia.
Cadwalader, J. S., Wexford.
Custer, Ella B., Philadelphia.
Davis, Fannie, Oil City.
Gulick, Esther W., Stroudsburg.
Hartman, W. L., West Pittston.
Hunsicker, Hannah M., Philadelphia.
Ingraham, S. C., Philadelphia.
Janvier, G. V., Royersford.
Levengood, B. B., Bellwood.
L'Amoreaux, S. H., Stroudsburg.
Ludy, J. B., Stroudsburg.
Mershon, O. F., Philadelphia.
Miller, N. C., Stroudsburg.
Wiley, H. E., Philadelphia.
Zook, Joseph A., Belleville.

RHODE ISLAND

Fitzgerald, V. L., Providence.
Thompson, E. G., Providence.

SOUTH CAROLINA

Sawyer, Olin, Georgetown.

SOUTH DAKOTA

Housman, W. M., Dell Rapids.

TENNESSEE.

Hill, Charles L., Nashville.
Noblitt, B. E., Fayetteville.
Saliba, J. A., Athens.

TEXAS

Currie, James D., Paluxy.
Davis, R. L., Princeton.
Fuller, T. E., Texarkana.
Lanham, H. M., Waco.
Morton, G. V., Ft. Worth.
Naylor, S. D., Stephenville.
Weeks, W. R., El Paso.
Wiesh, Moses, El Paso.

VERMONT

Blodgett, J. H., Bellows Falls
Sprague, L. P., Burlington

VIRGINIA

Anderson, M. L., Richmond.
Davenport, W. L., Meadow View.
Holman, W. M., Lee.
Kent, J. L., Lynchburg.
Miller, F. C., Cobham.
Noblin, J. A., Roda.
Williams, J. R., Richmond.
Wright, R. H., Richmond.

WASHINGTON

Elmore, Bruce, Seattle.
Else, J. E., Pullman.
Harbison, J. G., Spokane.
McCormack, P. D., Spokane.

WEST VIRGINIA

Prichard, Karl C., Huntington.
Haning, N. A., Wheeling.
Nunemaker, Tunis, Williamson.

WISCONSIN

Addleman, I. M., Wausau.
Campbell, L. A., Clear Lake.
Darby, G. S., Brodhead.
DeVoe, Charles A., Rosendale.
Donaldson, G. F., Shiocton.
Gleason, C. M., Manitowoc.
Irvine, Wesley, Manawa.
Krueger, Bernard, Cudahy.
Layton, O. M., Fairwater.
Martens, Wm. A., New Holstein.
Sartell, E. N., Hancock.
Schmidt, J. A., Brillion.
Smith, S. M., Milwaukee.
Thurtell, Herbert, Manitowoc.
Ward, J. P., Waukesha.
Wheeler, W. P., Oshkosh.

WYOMING

McDonald, G. E., Superior

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Proposed State Legislation

During the past week the following bills have been reported to the Bureau of Medical Legislation:

INDIANA

S. B. 15 provides for sanitary school-houses and inspection of the buildings as well as for medical inspection of the children. This most important bill was introduced by Senator McCarty, referred to the Committee on Education and favorably reported. It provides that all school-houses which shall hereafter be constructed in the state must be on dry and well-drained sites not nearer than 500 feet to any steam railroad, noise-making industry, or to any unhealthful conditions. Good walks and suitable playgrounds must be provided. Buildings must be dry, well-lighted and thoroughly fireproof, and must be supplied with pure drinking-water from driven wells or other sources approved by the health authorities. Heating, ventilation, toilet facilities and out-houses are provided for. Any school trustees who shall build any school-house which violates the provisions of this law are liable to a fine of from $100 to $500, and any claim for material or construction of any school-house that does not in every respect comply with the law is declared void. Provisions are also made for the cleaning of school-houses, for the medical inspection of school children, and for the use of text-books giving proper instruction in hygiene.

KANSAS

H. B. 135 to amend the existing laws regulating the purity of the waters of the state, has been reported on favorably by the committee on hygiene and public health. H. B. 301 is to authorize an annual conference of state and local boards of health. H. B. 124 provides for the regulation and inspection of hotels and public lodging-houses. H. B. 196, to prohibit the sale or giving away of cigarettes and cigarette papers, has been reported on favorably. S. B. 209, to define the powers and duties of local health officers and boards of health in the prevention of tuberculosis, has been reported on favorably by the senate committee on temperance and hygiene.

NEW HAMPSHIRE

H. B. 164 is to regulate the sale of narcotic drugs. H. B. 236 is to amend the food and drugs law of 1907 by establishing certain standards. H. B. 237 is to regulate the production and distribution of food products and to specify the kind of buildings which can be used for this purpose. H. B. 260 provides for the appointment of one or more school physicians in every city and town. H. B. 331 provides for the establishment of dispensaries for the free treatment of indigent persons suffering from tuberculosis, such dispensaries to be established by the state board of health and to be used for the dissemination of knowledge regarding the prevention and cure of tuberculosis, the study of social and occupational conditions predisposed to its development and the continuation of research experiments for the establishment of immunity and cure. H. B. 341 is to amend the law relating to the sale of drugs and medicines by providing for reciprocity in issuing licenses to apothecaries and druggists. H. B. 402 provides for the inspection of barbershops. H. B. 409 provides that all drains and sewers in the state must be covered. H. B. 480 is to give authority to the State Board of Health to publish and distribute information and instruction and to make rules to prevent ophthalmia neonatorum in public hospitals or institutions and in the practice of licensed midwives. S. B. 11 is to amend the public school law regarding vaccination, providing that no child shall attend any school in the state unless he has been vaccinated, has had smallpox, has submitted to the process of vaccination not less than three times, or holds a certificate of a registered physician that he is an unfit subject for vaccination.

OREGON

H. B. 18 is to prohibit the advertising of treatment or cure of venereal and other diseases and disorders and to make the owner or managing officer of any newspaper which shall print or publish such advertisements equally responsible with the person advertising and subject to imprisonment for one to six months. H. B. 41 provides for the inspection and regulation of dairy creameries and cheese factories. H. B. 141 provides for the suppression of contagious diseases among animals and for the addition of a veterinary surgeon to the state board of health. H. B. 142 is to prohibit the sale or giving away of cigarettes. H. B. 143 is to require all railroads operating in the state to furnish on all passenger coaches toilet facilities, running water and clean towels. H. B. 177 to prohibit the collection of hospital fees by any person or corporation, is evidently aimed at lumber and mining companies which have established company hospitals supported by assessments levied on their employés. H. B. 195 provides for the labeling of baking-powder. H. B. 216 provides for the appointment of county fruit inspectors who shall examine all orchards, nurseries, packing-houses and sales-rooms for fruit infected with any pest diseases or fungus. S. B. 24 provides for the establishment of county tuberculosis sanatoria. S. B. 26 is to regulate the quality of milk, cream, butter and cheese and the manner of conducting dairies. S. B. 37 provides that a medical certificate showing freedom from contagious venereal disease shall be required as a requisite for a marriage license. S B. 68 is a bill similar to the Indiana sterilization law, providing for the sterilization of confirmed criminals, insane persons, idiots, etc., authorizing the appointment of boards to examine into the mental condition of such persons and defining confirmed criminals as those serving a third term in any penitentiary or penal institution on conviction of a felony. S. B. 76 provides for state sanatoria for tuberculosis. S. B. 112 is to regulate the use of commercial feed stuffs in feeding live stock and domestic animals. S. B. 118, to amend the act regarding delinquent and dependent children, also provides for juvenile courts. S. B. 126 is to forbid the manufacture and sale of bleached or chemically treated or misbranded flour; it provides for the labeling of all packages or containers of flour.

SOUTH DAKOTA

S. B. 66, a long pure food bill, providing for a state food and dairy commission, is apparently drawn up along the lines of the model pure food bill drafted by the committee on uniform legislation of the Association of State and National Food and Dairy Departments. It contains the provisions for food standards endorsed by that body. H. B. 116 is to establish a sanatorium for tuberculosis at Custer, S. D.

UTAH

S. B. 41 provides for a state department of public health and state bacteriologic and pathologic laboratory for scientific research as to the cause, cure and prevention of disease. S. B. 42 provides for a state veterinarian and S. B. 43 for a state chemist and the establishment of a state chemical laboratory. These three bills were introduced by Senator Stookey and have been referred to the Committee on Public Health.

Dr. McCormack in North Carolina

Dr. J. N. McCormack spoke before a joint session of the *General Assembly of North Carolina* at a meeting held in the house of representatives at Raleigh on the evening of February 4. Speaker Graham of the house presided and Dr. R. H. Lewis, secretary of the North Carolina Board of Health, introduced Dr. McCormack and Dr. C. P. Wertenbaker of the U. S. Health and Marine-Hospital Service, who spoke on the control of tuberculosis. *The Raleigh News and Observer* says: "Both speakers made irresistible appeals. The hall of the house and its galleries were filled with eager listeners, to whom the message of the speakers was a revelation, showing existing conditions of startling magnitude and fraught with untold evil." The following comment shows the impression produced: "Public health has not received the attention to which its importance entitles it. The public is coming to see its duty and people and press will cooperate more than ever with the health department in measures that will make for long life"

The addresses delivered by Dr. McCormack before state legislatures probably constitute one of the most valuable lines of work ever undertaken by the Association. The unanimous testimony where these meetings have been held has been that, following them, the members of the legislature have been more favorably disposed to public health legislation than ever before and have better understood the attitude of the medical profession toward sanitary legislation. Arrangements are being made for addresses before a number of other state legislatures during the winter.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course]

Seventh Month—Second Weekly Meeting

LABOR

PHYSIOLOGY

DEFINITIONS.—Labor, confinement, accouchement, premature, at term, retarded, precipitate, slow, spontaneous, artificial. Normal, eutocia; normal forces, passenger, passages and mechanism. Abnormal, pathologic, dystocia; abnormal forces, passenger, passages or mechanism accidents.

PRECURSORY SYMPTOMS.—Increased uterine contraction, sinking, "settling" of uterus, vaginal discharge.

STAGES OF LABOR.—1, Dilatation of cervix; 2, expulsion of *child; 3, expulsion of placenta and membranes;* duration of each stage in primiparæ and multiparæ.

CAUSES OF LABOR.—Stimulation of central or uterine nerve centers; (a) direct, toxins (carbon dioxid, fetal, placental or ovarian products), menstrual periodicity, heredity; (b) reflex, fetal movements, distention of uterus, placental changes, infarcts, etc

UTERINE CONTRACTIONS.—Intermittent, involuntary, forcible, general contractions of uterine muscles. (a) "Labor pains," character, location, intensity. (b) Effect on maternal circulation. (c) Effect on uterus; harden uterus; change in shape and position; efface and dilate cervix, lower uterine segment, contraction ring, dilatation of os; "bags of water," shape, rupture. (d) Effect on vagina and pelvic floor. (e) Expulsion of child. (f) Expulsion of placenta and membranes. Effect of abdominal contractions.

MECHANISM

OCCIPITO-ANTERIOR PRESENTATIONS.—Cause, time, duration, diagnosis, of each stage. (1) Descent; engagement, sagittal suture, synclitism, obliquity, moulding caput. (2) Flexion. (3) Internal rotation. (4) Extension. (5) External rotation. (6) Expulsion.

OCCIPITO-POSTERIOR PRESENTATION.—Mechanism, (a) with anterior rotation, (b) with posterior rotation, of occiput.

FACE PRESENTATION.—Causes, frequency, diagnosis. Mechanism: (1) Descent. (2) Extension. (3) Internal rotation. (4) Flexion. (5) External rotation. (6) Expulsion. Mechanism of persistent mento-posterior.

BROW PRESENTATION.—Frequency, diagnosis, characteristic moulding mechanism.

BREECH PRESENTATION.—Abdominal and vaginal diagnosis, causes, frequency. Mechanism: (1) Descent. (2) Internal rotation. (3) Lateral flexion, displacement of arm (4) External rotation. (5) Expulsion. In persistent sacro posterior. Dangers to child, to the mother.

MECHANISM OF THIRD STAGE.—Situation of placenta, separation, extrusion, Duncan's, Schultze's method, expulsion from lower uterine segment, from vagina. Credé expression.

Society Proceedings

MEDICAL SOCIETY OF THE STATE OF NEW YORK

One Hundred and Third Annual Meeting, held at Albany, Jan 26 27, 1909

(Continued from page [illegible])

Intramuscular Injections in Syphilis

DR VICTOR C. PEDERSEN, New York· By using six points of injection the same point does not have to be used until thirteen weeks have elapsed, the injections being given once a week. To obviate the pain incident to these injections, the patient is placed in such a position as will relax the gluteal muscles. In over 300 injections of a 20 per cent. solution of salicylate of mercury the results have been good, but the solution should be well shaken. After having been officially responsible for over 5000 injections in 3½ years I am convinced that this method has the following advantages: It is the most efficient of all methods; it keeps the patient under control of the physician because he must return every week for the injection; node formation of longer than two or three days' duration is very rare; embolism is very uncommon, less than 1 in 1,000 injections. The usual precautions of sterilization should be taken. Toxic accumulation is scarcely excusable if palpation of the point of the previous injection is made before giving the next injection. The salicylate of mercury seems to be so *satisfactory* that no other preparation need be considered. Continuation of the injections is necessary for the usual two or three years, with one or two months rest in each year. The *patient's general health should be maintained at the highest* possible level by attention to diet and hygiene.

Untoward Results with Diphtheria Antitoxin with Special Reference to Asthma

DR. HERBERT F. GILLETTE, Cuba, N. Y.: About a year ago I published a letter asking for reports of cases in which the injection of diphtheria antitoxin had been followed by alarming symptoms or death, especially noting whether there was any history of asthma in the cases. Out of 40 answers received the information was definite and positive concerning 23 cases. Out of the 23, 16 patients gave a history of some form of respiratory disease. Six of the 16 patients died and 10 went into a state of collapse, with final recovery. Seven of the 23 gave no history of respiratory distress and the fact was definitely determined. Four of the 7 cases died and 3 went into a state of collapse with final recovery. The conclusions based on these reports were as follows: 1. There is a certain element of danger if any form of horse serum is used in subjects who have suffered from any form of respiratory embarrassment such as asthma, the so-called cardiac or renal asthma; hay fever, with resulting asthma, subjects liable to irritation of the mucous membranes when about a horse or stable. 2 Collapse or death was accompanied by a respiratory crisis and, when death occurred, it took place usually in less than ten minutes from the time of injection. 3. The administration of any form of horse serum is liable to cause collapse or death, if the subject suffered from respiratory distress and it is not due to any form of the antitoxin, or to any error on the part of the maker of the serum or to the age of the serum, but to some highly organized proteid present in the serum and the reaction of the proteid causes the crisis This reaction takes place only under certain conditions. 4. The heart continues to act long after respiration has ceased. This report is only a preliminary one.

Short Duration Typhoid Fever

Dr. Warren Coleman, New York: The term, "short duration typhoid fever" is used to include all types of the disease which last two weeks or less. The study was undertaken to discover the nature of the mild indefinite fevers which are seen in Bellevue Hospital during every typhoid season. The recovery of the typhoid bacillus from the blood in several cases led to a review of the entire subject. An astonishing confusion exists in literature concerning the milder and shorter forms of typhoid fever. The history of the diagnosis of the disease falls into two periods: (1) The period before the introduction of exact methods of diagnosis; (2) the period since the application of the Gruber test by Widal and the general employment of bacteriologic methods to the diagnosis of the disease. When the epidemiologic importance of the subject is considered it must be admitted that the study of the milder forms of typhoid has been greatly neglected. No one has yet undertaken to study the bacteriology of the blood in these cases. In the last five years, exclusive of 1908, 10 per cent. of 229 cases of typhoid fever on the second medical division have been of the short duration variety. The proportion of mild to severe cases varied in the different years. In 1904 they constituted 25 per cent. of the typhoids. The diagnosis in 20 of the 24 cases is not open to doubt since it rests on a positive serum reaction or a positive blood culture. The four remaining cases were diagnosed on clinical evidence. Judging from the literature, the diagnosis of mild typhoid is not often made. After an analysis of mortality statistics of typhoid in several of the large cities of this country, Reed, Vaughan and Shakespeare state that a large percentage of cases of this disease are not recognized as typhoid. The diagnosis of short duration typhoid can not be proven without laboratory methods. A patient's serum may give a positive reaction to the typhoid bacillus when the patient is not suffering from typhoid (e. g., typhoid cholecystitis and typhoid bacillus carriers). If a positive reaction appears transiently during the course of a febrile disease, not obviously due to some other cause, the diagnosis of typhoid is reasonably certain. Negative serum reactions possess no diagnostic value unless they are obtained daily throughout the febrile period and well into convalescence.. Positive bacteriologic examinations of the stools and urine do not necessarily prove that the patient has or has had typhoid fever. There is urgent need from the epidemiologic standpoint of a more thorough study of short duration and irregular forms of typhoid fever.

Voluntary Patients in State Hospitals for the Insane

Dr. Albert Warren Ferris, President of the State Commission of Lunacy: On Oct. 1, 1905, in fifteen hospitals for the insane in New York State, there were 26,423 patients. On Oct. 1, 1908, there were 29,421 patients. For many years the incidence of insanity in New York State has been such that over 6,000 new patients are received annually into the state hospitals. While about 2,000 patients die annually and many are discharged recovered or improved, the average net increase has been 715 each year. On Oct. 1, 1907, the net increase was 750, and on Oct. 1, 1908, the net increase amounted to 1,247. To meet this condition, existing hospitals have been enlarged as fast as money could be obtained for the purpose. The policy of physicians and friends of patients has been to delay until the insanity is well established and certification, adjudication and commitment are necessary. Many judges claim that in all alleged cases of insanity the subject should be taken into court in order that the matter may be decided and the patient committed or dismissed. The damage thus done the patient is not considered, but may never be repaired. Prof. Adolf Meyer suggests that a procedure resembling quarantine should be adopted for the protection of the family and the community and for the benefit of the patient. In this way all abuse of insane patients in jails and lockups would be avoided. In order to attain the results at which modern psychiatry aims, cases of mental disorder should be seen early. The borderline cases must be reached and saved from profound psychosis by early treatment when the mental equilibrium begins to waver. The State Commission in Lunacy has ruled that no patient can be admitted as voluntary "whose mind is so impaired as to render him incapable of forming a rational judgment as to the disposition of his person, or whose will is so weak as to render him incapable of resisting influence." The commission holds that "voluntary admissions" are patients whose liberty is not restricted, who are not insane within the meaning of the statute and who voluntarily remain under care. The commission introduced a bill into the legislature at the session of 1908 amending the insanity law so as to provide for the admission into all state hospitals except Matteawan and Dannemora of voluntary patients on their written application, pursuant to the regulations of the commission. The commission has ruled that no alcoholic patients without definite psychoses and no victims of drug habit without psychosis shall be admitted. Admission of voluntary patients has proved a success in several states. It is our duty to ascertain the causes of the alarming overproduction of insanity; to teach the people what dangers to avoid; to restrict demoralizing influences by law; *and while there is still time to gain the patient's confidence* to endeavor to adjust him to his environment. In order to accomplish these things successfully and to any extent, the patient must be seen early and hence the necessity for voluntary admissions.

DISCUSSION

Dr. R. H. Hutchins, Ogdensburg: At Ogdensburg, where this law has been in operation since last June, only nine persons have been admitted under the act and all came realizing *themselves that something was wrong with their minds.* These patients were not insane, but only drifting in that direction.

Dr. William S. Ely, Rochester: The necessity of having psychiatric wards in every general hospital can not be too strongly emphasized.

Dr. Edward D. Fisher, New York: I favor early treatment in these incipient cases of insanity and think that Dr. Ely's suggestion is good.

Dr. W. H. Kidder, Oswego: Civilization is becoming more and more complicated and there are constantly a greater number of people who can not accommodate themselves to it.

Dr. Albert Warren Ferris, President State Commission in Lunacy: The State Commission in Lunacy agrees with Drs. Ely and Fisher and would like to have psychiatric wards in every general hospital. It was the opinion of this commission that these early cases should have the same care as advanced cases; there should be a resident physician to care for them. If patients were sent in earlier they could often be sent out earlier. This would save money to the state. The cost per patient in the state hospitals is very low, only $179.60.

(To be continued)

Marriages

Jesse H. Briggs, M.D., to Miss Bessie Madden, both of Churubusco, Ind., January 26.

James Fowler Pressley, M.D., to Miss Ellen Page, both of San Francisco, January 28.

Charles S. Hamilton, M.D., to Mrs. Elizabeth Loving Brown, both of Columbus, Ohio, January, 21.

Vernon C. Morse, M.D., Cambridge, Mass., to Miss Mabel Miller Elliott of Clarence, N. S., January 21.

Charles Allen Betts, M.D., Fort Lawton, Wash., to Mrs. Harriet Smith Lester of Seattle, December 12.

John A. Ferrell, M.D., Kenansville, N. C., to Miss Lucile Deveraux Withers of Charlotte, N. C., January 28.

August Sauthoff, M.D., Madison, Wis., to **Rose Mary Blakelidge**, M.D., of La Grange, Ill., January 20.

William A. Knowlton, Jr., M.D., Independence, Ohio, to Miss Effie Margaret Dyer of Cleveland, January 27.

John Alphonso O'Donoghue, M.D., to Miss Florence Cecelia Johnson, both of Washington, D. C., December 29.

George Delbert Johnson, M.D., Fairmont, W. Va., to Miss Jessie Lee Jamison of Morgantown, W. Va., January 27.

William Graham Alexander, M.D., Evanston, Ill., to Mrs. Bertha Edna Tubbs Patrick, of Des Moines, Iowa, January 26.

Deaths

George Rolla Highsmith, M.D. Missouri Medical College, St. Louis, 1875; Bellevue Hospital Medical College, New York City, 1883; a member of the American Medical Association and Western Surgical and Gynecological Society; formerly president of the Missouri State Medical Association and president of the Association of Surgeons of the Wabash Railroad: local surgeon at Carrollton, Mo., for the Burlington, Wabash and Santa Fe systems; lecturer on railroad surgery in the Medical Department of the University of Missouri; secretary of the local board of U. S. Pension Examining Surgeons, died suddenly at his home, January 21, from heart disease, aged 60.

Charles Everts Rider, M.D. University of Vermont, Burlington, 1863; formerly of Rochester, N. Y.; a member of the American Ophthalmological Society and American Otological Society; emeritus professor of ophthalmology in the Medical Department of Syracuse University; a surgeon during the Civil War; honorary member of the Rochester Pathological Society; formerly president of the Monroe County Medical Society; surgeon of the First Battalion, Light Artillery, N. G. S., N. Y., in 1864; died January 31, at his home in Chappaqua, N. Y., aged 69.

Aaron G. Dickson, M.D. Vanderbilt University, Nashville, 1889; of Paragould, Ark.; a member of the American Medical Association and International Association of Railway Surgeons; chief surgeon of the Paragould and Southeastern Railway; local surgeon of the St. Louis, Iron Mountain and Southern Railway, and the St. Louis and Southwestern Railway; founder of, and surgeon to, Paragould Sanitarium; grand medical examiner of the A. O. U. W. of Arkansas; died at his home, January 27, from pneumonia, aged 41.

Edward Lawrence Patterson, M.D. University of Georgia, Augusta, 1887; of Barnwell, S. C.; a member of the American Medical Association and of the Association of Surgeons of the Southern and the Atlantic Coast Line railroad; formerly president of the Aiken and Barnwell County Medical societies; a surgeon in the State Militia; died in St. Luke's Hospital, New York City, January 23, nine days after a surgical operation on the bladder, aged 49.

Constantine Markt, M.D. Eclectic Medical Institute, Cincinnati, 1858; brigade surgeon of the southern division of the Ohio Militia from 1858 to 1860; for eighteen years secretary of the Hamilton, Ohio, board of health and four years treasurer of the board of education; and trustee of the Lane Free Library; died at his home, January 28, from senile debility, aged 76.

John Leslie Howard, M.D. University of Louisville, 1889: a member of the American Medical Association; formerly professor of bacteriology and pathologic histology in his alma mater, and consulting neurologist to the Louisville City Hospital; proprietor of the Howard Sanitarium, West Baden, Ind.; died at his home, January 23, aged 43.

William Henry Frizell, M.D. New Orleans School of Medicine, 1860; assistant surgeon of the Twelfth Mississippi Infantry, C. S. A., during the Civil War; a practitioner of Poplar Creek, Miss., for 43 years; died at his home in Deasonville, Miss., Dec. 5, 1908, from chronic nephritis and spinal sclerosis, aged 70.

Hugh M. Clendenin, M.D. Southwestern Homeopathic Medical College, Louisville, 1900; professor of physiology and histology and lecturer on minor and surgical anatomy in his alma mater; secretary of the State Homeopathic Medical Society; died at his home in Louisville, January 25, from pneumonia, aged 29.

Cornelius H. Bartlett, M.D. Geneva (N. Y.) Medical College, 1849; for nearly half a century a practitioner of Cattaraugus Co., N. Y.; one of the founders and twice president of the county medical society; a curator of the Buffalo Medical College; died at his home in Olean, January 21, aged 83.

John James Mitchell, M.D. New York Medical College, New York City, 1857; of Newburgh, N. Y.; for several years professor of chemistry in the New York Homeopathic Medical College; city physician of Brooklyn in 1858; died suddenly in Newburgh, February 1, from heart disease, aged 74.

William E. Meredith, M.D. University of Tennessee, Nashville, 1893; a member of the American Medical Association and of the local board of U. S. pension examining surgeons; and one of the proprietors of an infirmary at Scottsville, Ky.; died at his home in that city, January 29, aged 39.

Charles Gregg Alderman, M.D. Jefferson Medical College, Philadelphia, 1905; assistant surgeon U. S. Navy; who had been a patient in the United States Naval Hospital, New Fort Lyon, Colo., on account of tuberculosis; died from that disease at Lawn, near Lebanon, Pa., January 29, aged 24.

D. L. Cheatham, M.D. University of Maryland, Baltimore, 1874; for six years mayor of Sandersville, Ga.; and for a long time a member of the State Board of Education; died suddenly from cerebral hemorrhage, at his home January 25, aged 60.

Francis Joseph Rogers, M.D. University of Pennsylvania, Philadelphia, 1873; health officer of Stamford, Conn.: for twenty years a member of the school board and councilman of that city; died at his home, January 27, from nephritis, aged 59.

Joseph R. Phillips, M.D. Cleveland Homeopathic Medical College, 1883; for ten years a member of the local board of health, and for two terms its president; died at his home in Erie, Pa., from cerebral hemorrhage, January 27, aged 58.

J. Harry Forbes, M.D. College of Physicians and Surgeons, Baltimore, 1903; of Pawtucket, R. I.; died at the Twin City Hospital in that city January 24, from a gunshot wound received from his own revolver in a fight, aged 30.

Edward Joseph Gilleran, L.R.C.S.; L.R.C.P. Edinburgh, 1892; surgeon in the British army during the Boer war; formerly of York City; died at his home in La Junta, Colo., January 23, from pulmonary tuberculosis, aged 48.

Leonard J. Harvey, M.D. Washington University, St. Louis, 1875; a member of the Iowa State Medical Society and a veteran of the Civil War; died at his home in Alta, January 26, from locomotor ataxia, aged 65.

Jacob Preston Miller, M.D. Medical College of Ohio, Cincinnati, 1878; a member of the Medical Association of the District of Columbia; died at his home in Washington, January 23, from nephritis, aged 56.

William M. Alexander, M.D. University of Louisville, 1887; formerly of Kinsley, Kan.; and local surgeon of the Santa Fe System at that place; died in Sterling, Kan., January 1, from pneumonia, aged 46.

Francis S. McNamara, M.D. Royal College of Physicians and Surgeons, Dublin, Ireland, 1848; for nearly half a century a practitioner of Milwaukee; died at his home in that city, January 22, aged 93.

L. F. Overton, M.D. Memphis (Tenn.) Hospital Medical College, 1894; died at his home in Cleveland, Texas, January 29, from an overdose of morphin, said to have been self-administered, aged about 40.

John M. Bash, M.D. Medical College of Indiana, Indianapolis, 1874; a member of the Indiana State Medical Association; died at his home in Warsaw, January 29, from cerebral hemorrhage, aged 60.

J. Harper Donald, M.D. Medical College of the State of South Carolina, Charleston, 1877; died suddenly at his home in Piedmont, S. C., January 23, from cerebral hemorrhage, aged 52.

Daniel James Hanlon, M.D. Boston University School of Medicine, 1891; of Hyde Park, Mass.; died suddenly from heart disease at the house of a patient, January 24, aged 41.

Harold M. Jacobsen, M.D. University of Kiel, Germany, 1881; of Chicago; died at the home of his son in Burlington, Iowa, January 29, from an overdose of morphin, aged 54.

Thomas Stewart, M.D. Western Reserve University, Cleveland, 1874; of Carlisle, Pa.; died in a sanitarium in Cleveland, from heart disease, January 28, aged 57.

Lomax S. Anderson, M.D. Missouri Medical College, St. Louis, 1893; of Moss Point, Miss.; died from heart disease at Managua, Nicaragua, January 25, aged 40.

James Douglas Burns, M.D. Trinity Medical College, Toronto, 1902; died at his home in Paradise Valley, Nev., May 27, 1908, from pneumonia, aged 37.

William S. Simmons, M.D. University of Louisville, 1856; died at his home in Adairville, Ky., Aug. 12, 1908, from cancer of the mouth, aged 74.

Samuel G. Scoven, M.D. University of Georgia, Augusta, 1876; of Macon; died at the home of his daughter in Herndon, Ga., January 19, aged 76.

Joseph Kern, M.D. University of Jena, Germany, 1888; died at his home in Cecil, Wis., in May, 1908, from pulmonary tuberculosis, aged 43.

James Robert Dryden, M.D. Toronto School of Medicine, 1879; died at his home in Guelph, Ont., Dec. 2, 1908, aged 53.

James John Hall, M.D. Tulane University, New Orleans, 1868; died at his home near Orrville, Ala., January 25.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Connecticut Homeopathic: New Haven, Mar. 9 Sec, Dr. Edwin C M. Hall, 82 Grand Ave

Connecticut Eclectic: New Haven, Mar. 9. Sec, Dr. T. S Hodge, Torrington

Connecticut Regular: New Haven, Mar. 9 10. Sec, Dr. Charles A Tuttle, 196 York St.

Maine: Portland, Mar. 9 10. Dr. W. J Maybury, Saco

Massachusetts: Boston, Mar. 9-11. Sec., Dr. Edwin B. Harvey, Room 159, State House.

Alabama 1908 Reports

Dr. W. H. Sanders, chairman of the Board of Medical Examiners of Alabama, reports the written examinations held at Montgomery, June 16 19 and July 7-10, 1908. The number of subjects examined in was 10; total number of questions asked, 65; percentage required to pass, 75.

At the examination held June 16-19, 1908, the total number of candidates examined was 102, of whom 50 passed, including 7 non graduates and 52 failed, including 24 non-graduates. The following colleges were represented:

PASSED.

College	Year Grad.	Per Cent.
University of Alabama,	(1908)	75, 75, 75 1, 75 1, 75 4, 75.5, 75 9, 82 2, 83, 87.1.
Birmingham Medical College,	(1907) 78 2; (1908)	75, 75 1, 75 1, 76 4
Howard University, Washington	(1908)	75
Atlanta School of Medicine	(1908)	75.4, 77 3
Atlanta College of Physicians and Surgeons	(1908)	79 7
Chicago College of Medicine and Surgery	(1908)	75
Tulane University of Louisiana	(1907) 75; (1908)	75, 76 3
	(1908)	76 4
	(1886)	81 4
icine and Surgery	(1897)	76 2
	(1908)	75
	(1908)	75, 75
Memphis Hospital Medical College	(1886) 75; (1908)	75
University of the South	(1907)	75
Meharry Medical College	(1908)	75 1
University of Nashville	(1908)	75 1, 75 1, 75 1
Vanderbilt University,	(1907) 75; (1908)	75 1, 75 1, 75.4, 80 8, 83 7.
University of Virginia	(1907)	76 7

FAILED

College	Year Grad.	Per Cent.
University of Alabama	(1908)	58 3, 59.1, 61 2, 61 7
Atlanta School of Medicine,	(1902) 6 6, (1906) 62 7; (1907) 50 8; (1908)	52 7, 56 5
Mississippi Medical College	(1908)	42 4
Chattanooga Medical College	(1908)	31 6, 50 9, 57.8, 62
University of Nashville	(1908)	54 2, 55 8, 62 9, 63, 63 6
University of Tennessee	(1907) 63; (1908)	52 8, 58 4
Memphis Hospital Medical College	(1908)	62 8, 62 8
Meharry Medical College	(1908)	53 1, 59 6, 62 4
Gate City Medical College	(1908)	22

At the examination held July 7-10, 1908, the total number of candidates examined was 30, of whom 16 passed, including 2 non graduates, and 14 failed, including 3 non-graduates. The following colleges were represented:

PASSED

College	Year Grad	Per Cent.
University of Alabama	(1908)	75 6, 75 6, 75 8
Birmingham Medical College	(1908)	75, 75, 75, 75.5, 77 7
Denver and Gross College of Medicine	(1904)	75
University of Louisville		
Kentucky School of Medicine	(1908)	88 1
Johns Hopkins Medical School	(1908)	75 1
	(1908)	75 9
Memphis Hospital Medical College	(1908)	75.1, 76 2

FAILED

College	Year Grad	Per Cent.
University of Alabama		
Atlanta School of Medicine	(1898)	69 8
Hahnemann Medical College, Chicago	(1908)	64 2
Kentucky School of Medicine	(1907)	70 4
Mississippi Medical College	(1907)	47.7
Leonard School of Medicine	(1908)	50 7, 67 1
Meharry Medical College	(1905)	60 7
Vanderbilt University	(1908)	47 1
Memphis Hospital Medical College	(1908)	69 7
University of the South	(1908)	48 8
	(1908)	36 7

Virginia December Report

Dr. R S Martin, secretary of the Medical Examining Board of Virginia, reports the written and oral examination held at Lynchburg, Dec. 15 17, 1908. The number of subjects examined in was 9; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 49, of whom 28 passed and 21 failed. Seven reciprocal licenses were issued at this examination. The following colleges were represented:

PASSED.

College	Year Grad	Per Cent.
George Washington University.	(1906) 82; (1907) 78; (1908)	81
Georgetown University	(1907)	76
Johns Hopkins University Medical School	(1906)*	
University of Maryland	(1908)	75
Baltimore University	(1898)*	
Tulane University of Louisiana	(1898)*	
Med Chirur Coll. of Christ Institution, Baltimore.	(1904)	76
Hospital College of Medicine, Louisville	(1904)	75
Leonard School of Medicine	(1908)* (1908)	76
Medical College of South Carolina	(1902)*	
University of the South	(1907) 75; (1908)	76
Tennessee Medical College	(1907) 75; (1908)	77
Meharry Medical College	(1905) 75; (1908)	75
Medical College of Virginia	(1906) 76; (1908)	75, 75
University of Virginia	(1907) 75, 75; (1908)	76, 79
University College of Medicine, Richmond.	(1896)* (1908)	80

FAILED

College	Year Grad	Per Cent.
George Washington University	(1908)	73
Northwestern University Medical School	(1908)	70
Kentucky School of Medicine.	(1887)* (1906) 66; (1908)	48
Hospital College of Medicine, Louisville	(1908)	71
Baltimore Medical College	(1900) * (1907)	69, 71
College of Physicians and Surgeons, Baltimore	(1901)*	
College of Physicians and Surgeons, Boston	(1907)	61
Leonard School of Medicine	(1906) 46, 50; (1908)	59, 70, 74
University of the South	(1903) 73; (1907) 71; (1908)	66
University of Tennessee	(1891)*	
University of Virginia	(1908)	67

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
George Washington University	(1908)	Dist Colum.
Illinois Medical College	(1904)	Kentucky
University of Maryland.	(1908)	Maryland
Atlantic Medical College	(1907)	Maryland
University of Michigan	(1907)	Michigan
New York Homeopathic Medical College	(1901)	Kentucky
University of Virginia	(1907)	Maryland

* Took oral examinations

Book Notices

Quacks and Grafters By Ex Osteopath Cloth Pp. 126 Price, $1 25 Cincinnati Ohio: Cincinnati Medical Book Co

This little book is written by one who took up for a few years the "practice" of "osteopathy," but whose intelligence and honesty caused him to relinquish it after he was fully conversant with the pretense and graft connected therewith. He then returned to the more congenial—and reputable—profession of teaching. The book is in two parts; the first deals with conditions in and out of the medical profession that have made it possible for the followers of Still to fool the public; the second treats of "osteopathy" itself and, without acrimony, exposes this quasi scientific system of massage and throws light on the methods employed by the American Osteopathic Association to advertise and "boost" the "system" The author's attitude toward the medical profession is on the whole fair and without bias. That, as a layman, he has drawn some wrong conclusions from his observation of evils that admittedly exist in the profession of medicine is not to be wondered at, but most of his criticisms are eminently just. The book, whether read by layman or physician, will tend to increase the respect of each for the medical profession and to lead to a fuller appreciation of the inherent worthlessness of various irregular "systems" of healing that have become so common.

The Red City By S Weir Mitchell, M D, LL D Paper Pp. 421, with illustrations Price, $1 50 New York: The Century Co, 1908

Nearly all Dr. Mitchell's novels bear the impress of his scientific work in the shape of characterizations of various forms of mental malady. "The Red City" differs somewhat from its predecessors in that its psychologic studies, while keen and penetrating, involve no pathologic element. Entering on an important field of medical and national history, Dr. Mitchell has revived with interesting fidelity the yellow fever epidemic of 1793 in Philadelphia. It is a strongly drawn picture in which, on a background of mystery and terror, stand out in bold relief many touching and heroic examples of courage, faithfulness and love of kind. There are graphic sketches of Rush and some of his less famous colleagues—among them the eccentric Chovet—of Stephen Girard, and of the devoted Quakers, some of whom lost their lives in that battle with pestilence. The story never before has been told with such truth and vigor, and physicians will find this chapter of absorbing interest.

Not less attractive are the historic elements in the book. During the period described the constitution of the United States is still on trial; Jefferson, Hamilton and Randolph, the French and British Ministers, Jacobins, émigré nobles, well chosen representatives of the various classes, parties, factions and opinions in the state, move and live on these pages. We catch a sad glimpse of the aging Washington, a martyr of duty, preserving his sanity and equipoise despite harassmen from contentious passions, and relaxing, as only the strong man can, in the intimacy of the household circle. The famous incident of "Dispatch No. 10," which involved the United States in serious dispute with France and caused the downfall of Edmund Randolph, Secretary of State, is skilfully utilized in the interesting development of the fortunes of a young French vicomte, whose adventures in love, commerce and diplomacy we shall not here tell, lest we destroy the pleasure of the reader in following the narrative.

One is tempted to ask whether the figure of Herr Schmidt, a German of distinction dwelling in that charming Quaker household which is the stage center, represents an historic personage or is a child—no less vital—of the author's brain. "The pearl," as Herr Schmidt affectionately calls the daughter of the house, is perhaps the most charming feminine character that Dr. Mitchell has yet drawn, and moves in interesting contrast by the side of the large figure and striking personality of Miss Gainor Wynne, whom we knew and loved in "Hugh Wynne." But though "The Red City," in its realistic telling of the life of a past day, must needs recount the strife of parties, the threats of war, the dread visitation of pestilence, it does not deal with somber themes only. It is like a huge canvas whereon both cloud and sun find place; the social life of the great merchants is well depicted and in the illuminated spaces shine the colors of exquisite fancy, of rare wit and of delicious humor.

Dr. Mitchell, in this book, has added not alone to the obligation which the public owes him, but also to the many claims which he has on the regard of his medical brothers. He has by this and his other writings made it easier for his colleagues who may find attraction in fields remote from their profession, whether in literature, in music or in the fine arts; for he has shown that to excel in such fields need not, and does not, lessen the confidence of fellow-physicians or of the laity in one's competence as a diagnostician or practitioner. It would be interesting to have a methodical criticism of Dr. Mitchell's descriptions of disease in his other books; for his clinical pictures of homicidal melancholia, of hysteria and its social influence, of senile degeneration, etc., are drawn with the skill of vast experience and the artistic reserve of a master of two arts—fiction and medicine. We commend "The Red City" for evening company when the day's work is over and when it is pleasant to forget a while the patient and the sick-room.

UNSERE MITTELSCHUELER ZU HAUSE. Schulhygienische Studie Nach Erhebungen an Münchener Mittelschulen, veranstaltet durch die Schulkommission des Aerzlichen Vereins München. Von Eugen Dörnberger, pr. Arzt in München, und Karl Grassmann, pr. Arzt in München. Paper. Pp. 208. Price, 5 marks. München: J. F. Lehmanns, Verlag, 1908.

This volume, the outcome of an investigation instituted by the School Commitee of the Munich Medical Society, takes up
in detail the various influences which bear on the pupils of
c gymnasia and female seminaries of Munich out of school
m s. The first part, by Grassmann, is devoted to the con-
Co ion of the classical gymnasia, five of which were in-
lege, ed. The time for sleep is one of the most important
taraug nto which inquiry was made. The conclusion is that
of the c
ical Colle for sleep are sufficient on the average, but that no
John Ja increase in the demands of the schools could be
York City, t encroaching unduly on the hours for sleep.
fessor of that home is found to be far in excess of that
College; city e educational regulations. This increases as
in Newburgh, s in his classes and there is found to be a
William E. M y, either to push the work into the evening
ville, 1893; a m cient time for sleep or to use the after-
and of the local b the opportunities for exercise and recrea-
and one of the prop
died at his home in th ical culture gives rise to an interest-
Charles Gregg Alden rally admitted that more attention
Philadelphia, 1905; ass

should be given to the physical development of youth in the secondary schools, and it is proposed to put this under the care of medical men from the beginning to the end of the course. The first important question is whether time for this purpose can be afforded without lowering the ideal of intellectual attainment which is imposed on the schools by the increasing complexity of our civilization. If this is to be done the amount of home work must be correspondingly lessened to avoid encroaching on the hours for sleep. That such a diminution of home work is possible has been asserted by a number of educators. In this way time for physical exercise can be afforded by leaving the whole or the greater part of the afternoon free.

The second question is in regard to the placing of the control of the physical culture of the pupils. To put this responsibility wholly on the school might provide for a more economical and methodical use of time, but Grassmann thinks that this advantage would be more than overbalanced by the corresponding loss of home influence. The home, in his estimation, is the proper agency for tne building of character, and harm would be done by giving the school too exclusive control of the development of youth and thereby lessening the opportunities for the exercise of wholesome moral influence by the home.

The second part by Dr. Dörnberger deals with girls' schools and the technical schools for boys and follows much the same lines. The hours of sleep among the girls are close to the minimum and the sleep is often disturbed in consequence of prolongation of study into the night. About one-third of the required study is done in the evening. The greater ambition of the girls—and often of the parents—leads to a sacrifice of health in many cases.

There is too little attention given to the proper care and training of the body by exercise and gymnastics. Even walking is neglected. Girls are too apt to substitute fancy work and other occupations of insufficient value as means of physical culture for the more active exercises. Too often, especially in business schools, the leisure time is used in practice which affords no relaxation to the already overused faculties.

The proposition to put all instruction in the forenoon, so as to leave the afternoon free, is discussed, and it is pointed out that if this is done home work must be reduced so as to leave the greater part of this time for recreation.

The problems discussed demand the attention of parents, teachers and physicians, who must realize that well-equipped and successful men and women must be built on mentally and physically healthy boys and girls and that, as Dörnberger says, "the future of a nation is the flower of its youth." Those with whom these questions rest for solution will find in the book valuable facts and deductions.

DIE MECHANISCHE UND PSYCHISCHE BEHANDLUNG DER TUBERKULÖSEN BESONDERS IN HEILSTÄTTEN. (Vorlesungen über Tuberkulose, herausgegeben von Georg Liebe, Bd. I.) Von Georg Liebe. Paper. Pp. 267. Price, 5 marks. München: J. F. Lehmanns Verlag, 1909.

This monograph consists of fourteen lectures covering the ground of tuberculin treatment, breathing exercises, aftertreatment and the psychic management of tuberculous patients. It aims to give practitioners a clear account and directions for the execution of those measures which distinguish sanatorium treatment from that which the patient is likely to receive at home, unless under the especial supervision of a most painstaking physician. The book also considers many of the social questions which are raised by the occurrence of tuberculosis among the masses. To the sanatorium physician and also to the practitioner who wishes to do the best for the patient who remains at home, these lectures, representing the accumulated experience of the sanatoria, ought to be of special value. They are as yet accessible only to those who read German.

EINE NEUE HYPOTHESE UEBER URSACHEN UND WESEN BÖSARTIGER GESCHWÜLSTE. Von Otto Aichel, a.o. Professor der Gynäkologie an der Universität Santiago. Paper. Pp. 36. Price, 1.50 marks. München: J. F. Lehmanns Verlag, 1908.

This pamphlet reviews the theories advanced to account for the development of malignant growths and decides that none of them is sufficient. Aichel devoted himself to the championship of the hypothesis that the cancer cell or sarcoma cell is the progeny of a sexual conjugation of the leucocytes with the fixed tissue cells.

John Montcalm, Heretic. By Frederick A. Rupp, M.D. Cloth. Pp. 272, with Illustrations. Price, $1. Reading, Pa.: I. M. Beaver, 1908.

Dr. Rupp has written a novel with a typhoid epidemic as part of its medical flavor, and with a controversy over religion as its main motive. The scene is laid in the Maryland hills, and the local color is much in evidence.

Klinik der Bronchoskopie. Von Hermann von Schrotter, Dr. Phil. et Med. in Wien. Paper. Pp. 688, with Illustrations. Price, 20 marks. Jena: Verlag von Gustav Fischer, 1906.

This is a comprehensive work, giving the result of Schrotter's unusually extensive experience. The history of cases (often given in detail, including the clinical picture as it changes from day to day) forms an important part of this work. A critical discussion of the literature in this field is included, and the pathology of the mediastinum and of the neighboring organs is frequently discussed; so also are physiologic problems. The work on the whole forms a scholarly contribution to the literature in the field of bronchoscopy.

Miscellany

The Value of Hospital Ships in the Navy

On the program of the regular monthly meeting of the Manila Medical Society for December, appears an abstract of a paper by Dr. Charles F. Stokes, Surgeon, U. S. Navy, on "Some Features of Hospital Ships." In view of the widespread publicity and discussion which followed Dr. Stokes' appointment to the command of the U. S. Hospital Ship *Relief*, this paper outlining the work accomplished by hospital ships in the Navy is of special interest. The abstract is in part as follows:

"Hospital ships are positively needed even in time of peace. Repair ships, refrigerating ships, supply ships, colliers, etc., are provided in order to make the fleet self-sustaining from a material viewpoint as far as possible. Hospital ships are equally essential. The hospital ship accompanying the fleet allows an increased number of effectives to be returned to their ships for duty immediately after treatment.

"On joining the battle-ship fleet at Magdalena Bay, the *Relief* received over 160 patients, an average of 10 per vessel. There were over twenty cases of tuberculosis and fully half as many suspects. On the other vessels these patients were not only an encumbrance, but an actual menace to the rest of the fleet. Twenty-four patients required operative treatment. Twenty-two were suffering from mental disorders. The average number of patients admitted to the *Relief* while with the fleet was 10 per day. At Honolulu 59 cases of contagious diseases were sent on board the *Relief* from the vessels of the fleet, thus enabling the fleet to obtain pratique and avoid delay in quarantine. At Auckland and Sydney a number of patients who otherwise would have been left at hospitals on shore were taken on the *Relief* and returned to their ships at Manila. Several deaths occurring in the fleet, the bodies, instead of being buried at sea, were sent on board the *Relief*, embalmed and brought to Manila in metal caskets to be returned to friends and relatives in the States. The laboratories, *x*-ray outfit, dental equipment and medical and surgical supplies of the *Relief* have been of great help to the medical officers of the fleet.

"A hospital ship should be with a fleet in time of peace in order that her status as a non-combatant may be fully demonstrated, and in order to impress on the minds of the officers and men the fact that the articles of the Geneva Convention must be observed. The salient features of a hospital ship are stability, speed and coal endurance. She should have boats sufficient to transport patients entirely independent of other ships.

"The *Relief* has special machinery for hoisting injured and sick men over the side, as well as boats especially equipped with stretchers, etc. On the uppermost deck a thoroughly equipped operating room will be fitted up. Infectious wards are placed well aft by themselves. There are also wards for isolation and treatment of tuberculosis, as well as sun and air spaces and special mess rooms for convalescents. The lower decks contain medical and surgical wards, laboratories, dispensary, quarters for medical officers and hospital corps, store rooms, steam laundry and cold storage rooms. The navigation and engineer forces are berthed forward, separate from the hospital portion of the ship. Hospital ships have demonstrated their usefulness and should be and will be commanded by medical officers."

This statement, from the medical officer in command of the *Relief*, amply demonstrates the good judgment shown by President Roosevelt, the Secretary of the Navy, and Surgeon-General Rixey in placing the ship under command of a naval surgeon. As is usually the case, Dr. Stokes' experience and testimony will doubtless be overlooked by the newspaper cartoonists, paragraphers and joke-writers who made such liberal use of the incident at the time. It is apparently impossible to eradicate from the popular mind an idea which has once been firmly established, especially when it has been implanted through the medium of a joke, but for the sake of those who care to know, a few facts on the status of hospital ships may be of interest.

Under the agreement of the Geneva and The Hague Conventions, hospital ships are non-combatant and neutral and are therefore exempt from attack and entitled to protection. Hospital ships of the navies of England, Germany, France and Japan are manned by crews recruited from the merchant marine and captained by civilian masters, but commanded by naval surgeons who are therefore the responsible naval officers in charge. Army hospital ships, both in the countries above mentioned and in the United States, are manned and captained in the same way and are commanded by army surgeons. The hospital ship is simply a floating hospital. There is no more reason why a non-medical officer should be in command of a hospital on shipboard than on land. The surgeon in command of a hospital ship, either in the Army or Navy, has nothing whatever to do with sailing the vessel, but is simply the responsible naval officer in charge, while the master of the vessel, a civilian captain of the merchant marine, is responsible for the navigation of the vessel and for the manner in which it is handled, when not in port.

The protracted discussion which greeted the order of Surgeon-General Rixey was mainly participated in by those who did not discriminate between the commander and the master of the vessel. Time has proved the wisdom of the arrangement and value of hospital ships. They are necessary for the comfort of the men and the efficiency of the service whether in peace or war, and should be developed and encouraged in every possible way.

Segregation of Urine on New Principle.—Prof. R. Kutner has found time in his duties as secretary and editor for the central German postgraduate work, to devise a method of segregating the urine and applying local treatment to the bladder by suction. The cystoscope he uses has two passages; the outer one is made in such a way that it can be applied at any point of the bladder wall, especially over the mouth of the ureter and aspiration can be induced with a simple air pump. The other smaller passage, inside the first, allows the escape of the urine accumulating in response to the suction. By suction from the air pump it is possible, he says, to aspirate out from the mouth of the ureter urine from the connecting kidney as effectually as by catheterization of the ureter, while it avoids the necessity for introduction of the catheter and thus averts possibility of infection from this source. By adapting the aspirating passage to any point in the bladder wall it is possible further to apply the principles of Bier's suction hyperemia to a bladder lesion. Another advantage is that it is possible to apply a medicinal solution exactly at the point where needed. In his communication in the *Zeitschrift für aerztliche Fortbildung*, September 1, he discusses the drawbacks of other methods and describes his suction cystoscope with its two passages at the tip terminating in a funnel-shaped enlargement, the outer aspirating passage enclosing the inner outflow tube.

The Year's Progress in Epilepsy.—During the past year separate provision for epileptics has been made in seven states. In other states there are private or semi-private charities, so that in all about 5,000 epileptics are cared for in institutions specially designed for them. There are, of course, many epileptics treated in institutions for the insane and for the feeble-minded. New York State has recently established a second institution primarily for these cases, and Ohio is considering one for the northern part of the state to relieve the present institution at Gallipolis. Illinois is making a strong effort to obtain a sufficient appropriation from her legislature this winter. These points were brought out at the eighth annual meeting of the National Association for the Study of Epilepsy, Indianapolis, November 10. The separate care of the epileptic was uniformly favored, as was also a colony with large acreage, but the exact scope and limitations of the institution and the segregation of various types of epileptics were differently viewed. It was agreed that it is unfortunate for sane epileptics to know of and perhaps see near by, the buildings for the insane epileptic and for the low-grade custodial cases, for he realizes that he will in all probability pass through these stages if he lives long enough. This undoubtedly has its depressing effect. On the other hand, a building site can be so chosen as to make these divisions easily accessible to, and yet almost invisible from each other. Such an arrangement is the most economical, especially in view of the constant changes in the mental condition of the epileptic. The type of building advocated varies, of course, according to the class of case. All must be constructed with reference to the nature of the disease: all sources of danger must be seen to; corners must be rounded; hot pipes and fires properly protected; stairs made wide and with frequent landings; doors should usually open out rather than into rooms, so that a patient falling against them will not hold them closed. For the most desirable class of colonists, houses accommodating from 15 to 30 are best. A few single rooms may be included, but on the whole, are not so desirable as small dormitories with three, four or five beds. The occupation of the colonists is a very important problem, and is one of the fundamental objects of colony care. The epileptic is incapacitated by the nature of his disease from mingling on terms of equality with normal people, and the object of the institution should be to provide for him such surroundings as will enable him to do the maximum work and get the maximum enjoyment out of life. A large farm is desirable and patients can be expected to assist in the working of it, under wise supervision, of course.

Atoxyl and Other Remedies in Sleeping Sickness.—In an introduction to the *Quarterly Report of the Progress of Segregation Camps and the Medical Treatment of Sleeping Sickness in Uganda* (Sleeping Sickness Bureau, London, 1908), A. D. P. Hodges, senior medical officer, says: "There is no doubt that the hopes expressed by Professor Koch and others that atoxyl would prove a general and permanent cure for cases of sleeping sickness must now be abandoned." He states that the remedy, however, is capable of rendering very great service and sums up the situation as follows: 1. In most cases there is a temporary improvement from its use. 2. There is probably in most cases prolongation of life. 3. In all patients who come in contact with the tsetse fly there is diminution of the susceptibility to infection. 4. There are still considerable numbers of patients in whom treatment was begun in the early stages who are still alive and some of these may be eventually cured. 5. The results from atoxyl and mercury at present are promising and may prove to be more lasting than those from atoxyl alone. 6. Experience has been gained in the use of the drug, the supply is now constant, and it is to be hoped that the quality will improve yet further. 7. We have at present no treatment, apart from atoxyl and its allies, which has shown any sign whatever of successful results. Some reports from the camps indicate disappointment with the combination of mercury and atoxyl; but experience with another brand of sodium amino-phenyl arsenate seems to show equally efficient action without toxicity and at about one-third the price (*Quarterly Report*, p. 28). Recent work on the treatment of trypanosomiasis is reviewed in the *Bulletin of the Sleeping Sickness Bureau* (December, 1908). The work of Ehrlich is described and the hope is expressed that this experimenter will find a remedy as effective in man as arsenophenylglycin is in mice. E. Friedberger recommends the use of a mixture of atoxyl and thioglycollic acid (sulphydracetic acid) which he has found more effective than atoxyl alone when injected into mice. Plimmer and Bateman found that metallic antimony suspended in a mixture of palmitin and antiseptics (Lambkin's cream) was more efficient than any of its salts. There are some favorable reports from the use of other remedies, such as orpiment, Loeffler's solution of arsenic, and tartar emetic, but none appear to be conclusive. A new proprietary preparation, said to be the methyl homologue of sodium aminophenylarsenate has been tried, but produced poisonous effects. Reports from the segregation camps indicate that the good results of the atoxyl treatment are more manifest after two months' treatment than after three months, and would seem to show that it is a good plan to resort to a new remedy as soon as the first one tried has begun to lose its efficacy.

Hepatozoon Perniciosum; a Protozoon Parasite Pathogenic for White Rats.—W. W. Miller, in *Hygienic Laboratory Bulletin*, 46, June, 1908, describes the life history of a hemogregarine which is the only species of that class occurring in mammals which has been observed outside of India and Northern Africa, both tropical regions. It is the only species so far described which exhibits pathogenic properties. It infects white rats, causing sickness and eventually death. Experimentally, Miller has shown that wild rats are susceptible to infection, but distinct pathogenic effects have not been conclusively shown. The most decided pathogenic effect seems to be exerted on young animals. The life cycle of the parasites has been worked out, and it is found that the infection is transmitted from one animal to another by the agency of an intermediate host, the gamasid mite (*Lelaps echidninus*), which frequently infests both white and wild rats. The parasite taken into the digestive canal of the mite undergoes sexual development and appears to be taken with the mite into the digestive tract of the rat in which the encysted parasites are set free, penetrate the intestinal wall and after multiplication become encysted in the liver. Some escape into the general circulation. The merozoites when fully developed are set free in the liver capillaries as vermicules; the majority are speedily taken up by the phagocytic large lymphocytes and become encysted; a few may remain as vermicules. The parasites in the blood of the rat are again taken into the digestive canal of the mite and the cycle is repeated. That rats can be infected by feeding on infected mites has been shown experimentally, and this is probably the only way in which the infection is transmitted. Infection through the alimentary canal from an intermediary host has not been previously described from a protozoon blood parasite. The investigation is of interest, as it may suggest a means of destroying rats by infecting them with this disease.

Mosquitoes of the Philippine Islands.—An important study of the distribution of mosquitoes in the Philippine Islands with reference especially to the transmission of disease has been made by Clara S. Ludlow, M.Sc., under government auspices, and published in a monograph entitled "The Mosquitoes of the Philippine Islands" (Washington, D. C., 1908). It was found that a large number of species present in the islands had not been previously described; twenty-nine new species are here recorded, of which eight belong to the anophelinæ. The relation of this group to malaria seems to be evident from the occurrence of malaria in the localities where members of the anopheles group are most prevalent; but no pathologic investigations have been made to prove that these species in the Philippines are the carriers of the malaria parasite. It is a striking fact that the number of anopheles mosquitoes has diminished in the last few years in consequence of the prophylactic work undertaken by the sanitary authorities, including the draining of low lands and also the very general administration of quinin as a prophylactic measure. Four of the anopheles species present in the islands have been proved to be the host of malarial parasites in Africa and India. *Stegomyia calopus*, the proved host of yellow fever, is found in the Philippines, but yellow fever so far has never been present. Two other species of culicinæ are hosts of filariæ, but how far they are active in the Philippines is not shown by this investigation. The fact that the *Stegomyia* is present in the islands is of interest in connection with the presence of yellow fever in other countries with which the Philippines are in more frequent communication than formerly. The introduction of yellow fever into the Philippines would probably be followed by an epidemic unless great precautions were taken.

Economic Dietetics.—Under this title, Ira S. Wile, in *Charities and the Commons*, Jan. 9, 1909, calls attention to a neglected aspect of the diet question. Many persons of limited means suffer loss both in money and nutrition because they do not understand the relative cost of equal amounts of nutriment in the various articles of diet as purchased in the market and as prepared for the table. The average housekeeper is ignorant and extravagant. With a proper appreciation of food values, she might be able to save money, so that her children could be better clothed and housed and equally well fed. Careful instruction should be given both girls and boys along this line. Philanthropic workers should see to it that food-supplies are properly used and when aid is given in providing food, the kind and amount should be specified. Some of the menus recommended to the poor are beyond their means. As Dr. Wile says: "It is not a question of teaching people how to live when they have sufficient or abundant means. The problem, in part, is to teach people to live within their paltry incomes—to live well and to remain strong and healthy." The domestic science courses in the public schools are faulty in not placing the most needed forms of cooking in the front rank. "When a child is shown how to perfect French fried potatoes before learning how to prepare oatmeal, the course is not doing its full social duty to the child or to the community." Better information and education in this matter is urgently needed and the physician is the one to whom the community naturally looks to furnish it.

Medicolegal

Practice of Medicine Prior to 1864 or to 1884 Does Not Entitle to Certificate

The Court of Appeals of Kentucky says that the case of Webster vs. State Board of Health was instituted for the purpose of obtaining a writ of mandamus requiring the board to issue to the plaintiff a certificate authorizing him to practice medicine in that state. The principal allegation in the petition on which the right to the certificate was based was that for several years prior to Feb. 23, 1864, he was reputably and honorably engaged in the practice of medicine in the State of Kentucky.

The plaintiff at the time he filed his petition was evidently under the impression that Section 2613 of the Kentucky Statutes of 1903 was still in force, and overlooked the fact that the act of 1893, relative to empiricism, which forms a part of Chapter 85 of the Kentucky Statutes of 1903, has been repealed by an act on the same subject, which was approved March 18, 1904, and is found in Acts of 1904, Chapter 34.

By Acts of 1904, Chapter 34, no person is permitted to practice medicine in Kentucky unless he shall first stand a satisfactory examination by the board in the branches of medicine as taught in reputable medical colleges. The mere fact that the plaintiff practiced his profession prior to 1864 did not entitle him to a certificate. It would only entitle him to an examination, and not to a certificate, unless his examination showed that he was qualified in the opinion of the board to practice his profession.

Moreover, the petition alleged simply that the plaintiff had for several years prior to 1864 practiced medicine in Kentucky, but it did not allege that he had continuously practiced medicine since that time. Over forty years have passed since 1864, and it was not alleged that during any of that time the plaintiff had practiced his profession. If we take the mere letter of the statute, the allegation would seemingly be sufficient; but the legislature did not mean that any person who was practicing the profession of medicine prior to 1864, as in the act of 1893, or prior to 1884, as in the present statute, should be entitled to a certificate if he had not been continuously practicing since that time.

The object of the statute is to elevate the practice of medicine, and to raise a high standard of proficiency which the applicant must fully measure up to in order to secure a certificate authorizing him to practice his profession. One who had simply practiced medicine prior to 1864, but had not practiced it since, or prior to 1884, but had not practiced it since, would be in no wise qualified to practice medicine in 1907.

Construing the act, then, according to its spirit rather than its letter, in order to authorize the plaintiff to stand an examination and receive a certificate under the present law, he must either receive a diploma from a reputable medical college legally chartered under the laws of Kentucky or of some other state in this Union, or, in the absence of a diploma, furnish satisfactory evidence that he was reputably and honorably engaged in the practice of medicine in Kentucky continuously from Feb. 23, 1884, until his application was made.

The statute under consideration is a wise and beneficent exercise of the police power of the commonwealth, enacted for the purpose of protecting the people of the state from imposition by empirics and quacks. It does not seek to prevent any honorable man or woman from practicing the profession of medicine. It only requires that they shall show, by a satisfactory examination before the State Board of Health, that they are qualified.

There was no suggestion in the plaintiff's petition that the board was acting arbitrarily, or that it unlawfully sought to prevent him from obtaining a certificate; and the court is not entitled, in the absence of such an allegation, to indulge in any presumption against its fairness. It is the high duty of the board to protect the health and safety of the public by requiring every applicant for a certificate to practice medicine to first show his qualifications.

It is not necessary to demonstrate the constitutionality of the act. Such legislation has been uniformly upheld by this court and other courts throughout the land.

Non-Mailable Information, Etc., Pertaining to Abortions

The United States District Court, Southern District of California, holds, in the case of United States vs. Somers, that that part of the federal statute (Section 3893 of the Revised Statutes of the United States) which prohibits the mailing of any letter giving information concerning articles or things designed or intended to procure abortion is not limited to physical substances capable of transmission through the mail, but includes treatments and operations, indeed, everything whether material or ideal, designed or intended for the purpose above stated.

The court says that while the letter charged to have been written by the defendant stated that he knew of no medicine that would bring about an abortion, yet, when read in connection with the letter of inquiry to which it was a reply, it did in effect inform the addressee that the defendant had at his command in Los Angeles some sort of means for the procuring of an abortion, although the means were not specified. It might be fairly conceded, however, that the means referred to were, as contended by the defendant's counsel at the oral argument, and using the language of the letter of inquiry, "some kind of operation."

The language of the section is: "Every obscene book . . . and every article or thing designed or intended for the . . . procuring of abortion, and every . . . letter . . . giving information directly or indirectly where or how or by whom or by what means any of the hereinbefore mentioned matters, articles or things may be obtained . . . are hereby declared to be non-mailable matter," etc.

Manifestly an "operation" is a "thing" within the accepted definition of the two words, and there is no peculiar phraseology in the statute which restricts the ordinary signification of the word "things." The participle of the verb phrase, "may be obtained," is not limited in its use to the acquisition of material substances, but is coextensive with the word "things," and can be suitably used to designate the attainment of whatever one may desire.

So the court is satisfied that an "operation" is a "thing" within the letter, as it admittedly is within the spirit, of the statute.

Unlawful Use of Titles by "Osteopathic and Magnetic" Physicians and "Drugless" Doctors

The Supreme Court of Washington, in the case of State vs. Pollman, where it affirms a conviction of the defendant of practicing medicine without a license, says that the defendant had maintained an office and place of business in front of and on the doors of which he had caused his name to be lettered, with the words, "Physician," and "Dr.," and had otherwise advertised a title which tended to show that he was a lawful practitioner of medicine and surgery under the laws of the State of Washington, when, in fact, he was not such a practitioner. It is competent for the legislature to prohibit acts of this kind. Its purpose in so doing is to protect the people against deception.

The Washington statute provides that "Any person shall be deemed as practicing within the meaning of this act who shall have and maintain an office or place of business with his or her name and the words physician or surgeon, 'Doctor,' 'M.D.' or 'M.B.' in public view, or shall assume or advertise the title of doctor or any title which shall show or shall tend to show that the person assuming or advertising the same is a lawful practitioner of any of the branches of medicine or surgery in such a manner as to convey the impression that he or she is a practitioner of medicine or surgery under the laws of this state."

The titles which the statute sets out are those usually associated with practitioners of the regular schools who treat diseases by the administration of remedies in the nature of drugs and their compounds, rather than with practitioners who treat solely by appeals to Divinity, the occult, or by "manually manipulating the limbs, muscles, nerves, and by flexing and manually manipulating the joints of the body," and it is practitioners of the regular schools rather than the others that the ill and infirm seeking relief usually expect to find when entering a room whose door has lettered on it the name of a person preceded by the title, "Dr.," or followed by the letters "M.D." or "Physician and Surgeon."

The defendant, it was true, prefixed to the word, "Physician" the words "osteopathic and magnetic" in one instance, and the word "drugless" in another; but these did not make the use of the word lawful. The statute is a prohibition against any use of the word in connection with announcements of the profession or business of a person other than practitioners of medicine and surgery who have passed the examination prescribed in the statute and received the license therein provided for, and this prohibition is not evaded by the use of qualifying adjectives prefixed to the prohibited words. The statute also uses the word "doctor," instead of the more common abbreviation "Dr.," but it is equally a prohibition against the use of either. Its purpose being to prevent deception, the courts will give to it that meaning which will most effectually accomplish that purpose.

It was said, however, that the part of the statute here in consideration could not lawfully be enacted under an act entitled, "An act to regulate the practice of medicine and surgery in the State of Washington," etc., but the court thinks the title sufficiently broad. To provide who may lawfully call themselves "Doctors," "Physicians," or "Surgeons" is clearly within the title of an act entitled, "An act to regulate the practice of medicine and surgery."

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

January 30

1 The Ethics of Our Profession. A. Vander Veer, Albany, N. Y.
2 *Serodiagnosis of Syphilis, and Its Clinical Value. W. J. Butler, Chicago.
3 Pathology and Treatment of Chronic Gonorrhea. A. A. Uhle and W. H. Mackinney, Philadelphia.
4 Clinical Gonorrhea in the Male (continued). M. Huhner, New York.
5 Preventive and Abortive Treatment of Mastoiditis. W. S Bryant, New York.
6 *Repair of Fractures. C. O. Files, Portland, Ore.
7 Methodical Occlusion of the Eyes in the Study of Their Etiologic Significance in Disturbances of the Nervous System. N. B. Jenkins, New York.

2. **Serodiagnosis of Syphilis.**—Butler discusses the theory on which serodiagnosis is based, and describes the substances employed in the test and the methods of their preparation, with the mode of performing the test. He discusses the practical results of the reaction, which have been particularly illuminating in diseases of the central nervous system, especially general paresis and tabes. In visceral syphilis, also, it is very useful, especially when we remember that next to tuberculosis, syphilis is the most important cause of death in man. He further discusses hereditary syphilis, and the influence of antisyphilitic treatment on the reaction, and says that the significance of the reaction with regard to therapeutics may be summed up as follows: The reaction when positive is an indication of activity of syphilis, and it therefore follows that a positive reaction is an indication for antisyphilitic therapy.

6. **Repair of Fractures.**—Files points out that in fractures, after the coaptation of the broken ends of the bones and their fixation, the ordinary inflammatory changes are going on The extravasation of the blood into the tissues, etc., causes a stasis of repair for a week or ten days or more, during which absorption is going on more or less rapidly. He points out that in severe sprains, e. g., of the ankle, the early and frequent use of electricity and massage practically prevents swelling and greatly accelerates recovery, by preventing the engorgement of the tissues and the stasis of blood, so that the work of repair goes on faster. He holds that the conditions are analogous and that similar results will take place in the case of fractures.

Boston Medical and Surgical Journal

January 28

8 *Some of the Vagaries of the Obstetrician from the Standpoint of the Pediatrician. J. L. Morse, Boston.
9 What Type of Operation is Best Adapted for the Relief of Disease of the Frontal Sinus? E. A. Crockett, Boston.
10 *Laryngotomy and Laryngectomy for Cancer. D. C. Greene, Boston.
11 Care of Fractures in General Practice. G. H. Francis, Brookline, Mass.
12 Exhibit of X-Ray Plates of Fractures. C. C. Simmons, Boston.
13 *The Cold Storage of Poultry. W. F. Boos, Boston.
14 Case Reports: Small Round-Cell Sarcoma of Tonsil, and Adenocarcinoma of the Left Maxillary Sinus. F. S. Crossfield, Hartford, Conn.

8. **Obstetrical Vagaries and the Pediatrician.**—Morse discusses the conditions met with by the pediatrician resulting from the practice of obstetricians. He considers the relations of cyanosis and congenital heart disease, phimosis, breast feeding, artificial feeding, premature infants, icterus and sepsis of new-born infants, autointoxication and congenital deformities. Some of his aphorisms are as follows: It is safe to say that if a new-born baby is cyanotic the one thing that is not causing the symptom, cyanosis, is a patent foramen ovale. The term phimosis should be restricted to the cases which persist into later boyhood. While phimosis is rare, adhesions are universal. During infancy he believes that neither true nor false phimosis often causes symptoms. There should be no interference without definite symptoms, and then if a cutting operation is necessary, a slitting of the foreskin is less harmful. In most cases the breaking up of adhesions with a probe and the retraction of the prepuce is sufficient to relieve all symptoms. He deprecates the "epidemic of circumcision which has arisen in the last few years." He also deprecates the giving of too strong mixtures and of too large amounts of food to new-born infants and to premature infants. Jaundice in

the new-born is not necessarily jaundice of the new-born; it may be due to sepsis or other causes. Sepsis is more common in the new-born than is generally supposed; it causes fever, jaundice, cyanosis, hemorrhages, disturbances of digestion, bronchitis and bronchopneumonia. Infection may gain entrance during labor, or after birth by the introduction of a dirty finger into the mouth or by not keeping dirty water out of the mouth during bathing. Autointoxication is not uncommon. Castor oil is the best remedy for it.

10. **Laryngotomy and Laryngectomy for Cancer.**—Greene reviews the history and describes the technic of laryngotomy and laryngectomy, also the after treatment. The mortality can be kept at a low figure by attention to the following details:

1 A careful selection of cases
2 Attention to the cleanliness of the mouth.
3 The avoidance of shock by (a) the use of atropin before operation. (b) local use of cocain during operation; (c) the Trendelenburg position during the second stage
4 The avoidance of inhalation pneumonia by (1) the Trendelenburg position during operation, and (2) rectal feeding and elevation of the foot of the bed after operation.

13. **Cold Storage of Poultry.**—Boos discusses the alleged frequency of ptomain poisoning from cold storage poultry. He shows that the cold storage *per se* can not possibly be responsible. In illustration of the preservative power of cold, he describes in detail a case of a mammoth found in a state of perfect preservation two years ago in northern Siberia. The mammoth had apparently fallen into a crevasse and died in its struggles to get out. It had lain in cold storage for over 10,000 years, and when its flesh was thawed it formed palatable food both for wolves and men. The poultry should be completely drawn before being placed in cold storage, but the consumer should buy the frozen bird and thaw it at room temperature, for. as the author shows, the usual handling in thawing the birds before sale is such as to predispose to decomposition.

Medical Record, New York

January 30

15 Leukemia in Advanced Life A. A. Smith, New York.
16 *Some Common Injuries of the Elbow. J. P. Warbasse, Brooklyn
17 *Motor Car Miscarriage. E. P. Davis, Philadelphia.
18 *Medical Psychology G. V. N. Dearborn, Boston.
19 Early Diagnosis of Pulmonary Tuberculosis. A. H. Garvin, Ray Brook, N. Y.

16. **Injuries of the Elbow.**—Warbasse discusses contusions of the elbow joint, fractures, separation of the epiphyses, and dislocations, illustrating his article with radiographs. The first essential is familiarity with the bony landmarks. There need be no hesitancy in the use of general anesthesia. For the diagnosis of fracture or dislocation one should expose both elbows, and, with a pencil or ink, mark on the uninjured joint the three bony points; the tips of the internal and external condyles and the tip of th olecranon. With the arm in a straight position these three points should be nearly in a straight line. With the elbow at a right angle they should make approximately an equilateral triangle. The same marks should be made on the injured side, and the examination proceeded with. Even when there is much swelling, steady pressure will reveal the condyles. The head of the radius should be identified, and with both arms extended, the carrying angle of the two sides should be compared. These are the important points of inspection. Systematic examination is important. One should take up separately each location and feature of the injury. Is the swelling or ecchymosis localized or diffuse? Locate the point of tenderness. Is crepitus present? Is either condyle movable? Examine the olecranon process. Is there fracture or dislocation of the head of the radius? Each part of the three bones entering into the joint should be considered separately. No matter how skilled and thorough one is in these examinations the *x*-ray is an almost indispensable adjunct to treatment. As to the putting up of such injuries, Warbasse stands on the middle ground, between the extreme flexionists of Boston and the extensionists of Philadelphia, although flexion is applicable to the majority of cases.

17. **Motor Car Miscarriage.**—Davis says that a great shock or injury is sometimes better borne by pregnant women than frequently repeated shock, e. g., the use of the sewing machine with the foot. He reports cases illustrating the fact that motoring during the early months of pregnancy is frequently followed by abortion. The danger seems to lie in the fact that the rapid motion of a motor car subjects the patient to many small frequent jars. The characteristics of abortion following motoring are its slow and insidious development without bright hemorrhage or pain. These abortions are as a rule incomplete and require curetting. While motoring is dangerous in early pregnancy, in the latter months of gestation and with reasonable precautions as to smoothness of roads and moderation of speed, it may prove exceedingly useful.

18. **Medical Psychology.**—Dearborn urges the importance in medical education of instruction in psychopathology, and points out that it is essential for both the physician and surgeon if they are—as is so frequently urged—to treat, not the disease, but the individual suffering from the disease. Academic psychology has failed completely to make good in the laboratories. The new psychology finds its physical basis inherently in the neuroplasm, the protoplasm of the nerve. It is incumbent, therefore, that the medical schools for the present must supply their own psychology, as they do their own anatomy and much of their biology and chemistry. He refers to the courses in this department already existing at Johns Hopkins and Tufts medical colleges.

Lancet-Clinic, Cincinnati

January 30

20 *Carbon Dioxid Snow in Skin Lesions. M. L. Heidingsfeld and C. A. Ihle, Cincinnati
21 Psychotherapeutics: Its Application and Limitations. I. O. Allen, Centerville, Ind.
22 Sugar-Splitting Ferment in Treatment of Diabetes. C. W. Orr, Cincinnati.

20. **Carbon Dioxid Snow.**—Heidingsfeld and Ihle's article is a further report in extension of the first named author's article on "Liquid Carbonic Snow in Dermatology," published in the *Ohio State Medical Journal*, August, 1908, and abstracted in The Journal, Sept. 19, 1908, p. 1037. The authors revise their previously expressed conclusions as follows:

> Carbon dioxid snow is especially well adapted for the removal of pigmented and selected types of vascular nevi. It is not particularly efficacious [illegible] marks, and possesses a doubtful and rather a [illegible] successful treatment and permanent cure of [illegible]
>
> It commends itself for certain forms of senile keratoses and degenerations of the skin. It is still a remedy of too tentative a character to commend itself as the method of choice in epitheliomata, common and venereal warts, lupus vulgaris, leucoplakia, lichen planus, and a host of other cutaneous affections, as was previously suggested.
>
> Carbon dioxid snow, however, commends itself to every dermatologist as a therapeutic agent of unquestioned merit, worthy of an indispensable place in dermatologic practice.

Virginia Medical Semi-Monthly, Richmond

January 22

23 *Cesarean Section. L. C. Morris, Birmingham, Ala.
24 Gastroenterostomy for Ulcer of the Stomach or Its Sequelæ. G. T. Vaughan, Washington, D. C.
25 Bier's Hyperemic Treatment—Its Practical Application by the General Practitioner. W. A. Strother, Bedford City, Va.
26 *Is Mercury a Specific in Infectious and Contagious Diseases, as Well as in Syphilis? H. E. Jones, Roanoke, Va.
27 Treatment of Compound Fractures. E. M. Magruder, Charlottesville, Va.
28 Typhoid—Importance of Early Diagnosis—Fasting—Special Diet—Surgical Rest of Bowel—and Simplicity of Treatment. A. J. Burkholder, Mt. Sidney, Va.
29 Prevention of Typhoid. W. A. Plecker, Hampton, Va.
30 Obstruction of the Bowel. C. T. Souther, Cincinnati.

23. Abstracted in The Journal, Nov. 21, 1908, p. 1807.

26. Abstracted in Society Proceedings, The Journal, Nov. 7, 1908, p. 1625.

Surgery, Gynecology and Obstetrics, Chicago

January

31 Papillary Cystadenoma in a Supernumerary Ovary. R. T. Frank, New York
32 *Idiopathic Progressive Curvature of the Radius, or So-called Madelung's Deformity of the Wrist (Carpus Varus and Carpus Valgus). DeW. Stetten, New York
33 Parathyroid Tumors. J. C. DaCosta, Philadelphia
34 *Fracture of the Astragalus. J. H. Stealy, Freeport, Ill.
35 Tenosynovitis of the Hand. A. B. Kanavel, Chicago.
36 Carcinoma of the Gall Bladder; Presence of Stones as a Factor in the Etiology. R. R. Huggins and W. H. Ingram, Pittsburg, Pa.
37 Temporary Colostomy as a Curative Measure in Certain Forms of Postoperative Fecal Fistula. J. M. Elder, Montreal, Canada.

38 *Question of Diagnosis in the Case of a Patient Complaining of "Indigestion." A. C. Vietor, Boston.
39 Acute Traumatic Tetanus Treated by Magnesium Sulphate. A. P. Heineck, Chicago.
40 *Temporary Ventrosuspension of the Uterus. E. H. Ochsner, Chicago.
41* Why Operations for Bunion Fail, with Description of One That Does Not. J. L. Porter, Chicago.
42 Case of Multiple Peptic Ulcers of the Stomach Followed by Perforation. Autopsy. J. H. Hewitt, Cleveland, O.
43 Effective Dressing for Thigh Amputations. W. Van Hook, Chicago.
44 Coaptation and Imbricating Suture for Closing Abdominal Incision. D. T. Gilliam, Columbus, O.
45 Gastric Accretion. Case with Gastrotomy. A. M. Smith, Cherokee, Kansas.
46 Uterus Duplex Separatus cum Vagina Separata. A. R. Cunningham, Spokane, Wash.
47 Simple, Isolated Dislocation of the Carpal Scaphoid. H. B. Stone, Charlottesville, Va.

32. **Idiopathic Progressive Curvature of the Radius.**—Stetten discusses at considerable length the deformity of the wrist first clearly described by Madelung in 1878, and draws the following conclusions:

1. The so-called Madelung's deformity of the wrist is due to an antero-posterior bowing of the radius, usually of the shaft proper, occasionally of the epiphysis, and sometimes of both. This produces a deviation of the articular surface and an apparent subluxation of the wrist. The deformity is usually bilateral.
2. Heredity, the female sex, and youth (about eleven years) are predisposing factors, and the exciting cause is a local dystrophy, an irregular ossification of the distal extremity of the diaphysis, or of the proximal portion of the epiphysis, or both.
3. There are two distinct types, a forward, or common, and a backward, or rarer, one, in both of which, however, there is generally an exaggeration of the normal curvature of the radius toward the ulna. A corresponding increased inclination of the joint surface toward the ulna results, with adduction of the hand, and an angulation of the first row of carpal bones. The carpus usually retains its normal relations to the radius, but the caput ulnæ is dislocated backward or forward in the lower radioulnar and triangular-cuneiform articulations.
4. The disease is one of the growth period, developing spontaneously, with pain, and [illegible] (from two to three years) with limitation [illegible] l increase of motion in the direction of the [illegible] conditions simulate the lesion, but the histor [illegible] tablish the diagnosis.
5. The prognosis is good and treatment consists in osteotomy of the radius after the disease has run its course and the symptoms or deformity justify surgical intervention.

He summarizes a large number of reported cases.

34. **Fracture of the Astragalus.**—Stealy discusses this subject at length. He says that in injury to the ankle, with great pain and swelling, a radiograph is essential to a proper diagnosis, which must be guided by the manner in which the injury was sustained. The reduction of a dislocated fragment is almost always impossible. This condition will not correct itself. A dislocated fragment is liable to necrosis and destructive inflammation with suppuration, wherefore the dislocated fragment should be extirpated as soon as possible after diagnosis. The operation should be done expeditiously through one incision without destruction of important tissues.

38. **The Diagnosis of "Indigestion."**—Vietor says that symptoms of so-called indigestion group themselves as sensory and motor phenomena referred to the abdomen, but especially to the upper abdomen or middle zone of the trunk, and accompanied more or less by some degree of related or reflex secretory, nutritive, visceral, circulatory, respiratory, neuromuscular or psychic disturbances. The uncertainty of treatment directed to the digestibility of the foods and to the improvement of the digestive powers of the patient, coupled with laboratory and surgical experience, raises the presumption that symptoms of so-called indigestion are really symptoms of definite pathologic conditions intermediate to the terminal lesions long noted on autopsy. The importance of the knowledge of the frequent displacement of organs in the middle zone of the trunk, and that that zone acts as a reflex alarm center for the whole body is emphasized. In attempting to locate a pathologic condition causing symptoms in the upper abdomen, errors are most likely to be avoided by first excluding all causes lying entirely outside of the abdomen. But no matter how clear the presumption that a sufficient cause exists elsewhere, the diagnosis should not be considered established till affections of the abdominal wall and of the abdominal viscera are in turn excluded. The question of incompetence of the abdominal wall is of primary importance and is always accompanied by some displacement of the viscera. No matter where the viscera are displaced, their ultimate proximal attachments and their efferent vessels and nerves are still derived from the original sources in the upper abdomen. Hence, whenever the abdominal viscera are displaced, traction, with or without kinking, and torsion on their attachments can not be excluded. The pathologic effects of displacement, traction, kinking and torsion have been abundantly demonstrated elsewhere in the body. In the light of the foregoing, one can not but question whether the more definitely demonstrated lesions of the upper abdominal viscera—and even appendicitis and other lesions in the lower abdomen—are not more remote effects of this traction, kinking and torsion.

40. **Temporary Ventrosuspension of Uterus.**—It occurred to Ochsner, years ago, that if one could secure a temporary ventrosuspension of the uterus in practically every case of extensive pelvic infection in which a radical operation is performed, the prevention of the undesirable after-effects frequently found after operations of permanent ventrofixation and ventrosuspension would be avoided. He describes an operation with this object in view, for which he claims the following advantages: It has none of the objections attributed to permanent ventrosuspension or fixation; it is extremely simple and consequently easy of application; it does not open up new areas for infection; it does not increase the shock of operation; it leaves the pelvic organs in as nearly a normal condition as the pathologic conditions for which the operation is undertaken permit; and, finally, it has the great advantage of apparently being practically always effective.

41. Published in *Lancet Clinic,* Dec. 26, 1908, and *Louisville Monthly Journal of Medicine and Surgery,* January, 1909; and abstracted in The Journal, Jan. 16, 1909, p. 248.

Bulletin Lying-In Hospital of City of New York

September, 1908

48 Five Cases of Acute Gangrenous Appendicitis Occurring During Pregnancy. R. W. Lobenstine, New York.
49 *Management of Cardiac Disease with Broken Compensation During Pregnancy and Labor. J. A. Harrar, New York.
50 *Tuberculosis as a Complication of Pregnancy and Parturition. R. W. Lobenstine, New York.
51 Management of Occipito-Posterior and Transverse Positions of the Fetal Head. C. B. Knapp, New York.

49. **Cardiac Disease During Pregnancy and Labor.**—Harrar, on a basis of ninety-seven cases, discusses valvular disease in which loss of compensation has occurred during pregnancy or labor. He emphasizes the fact that serious loss of compensation can occur during the latter months of pregnancy and yet the woman be put into serviceable condition and go on normally with pregnancy. The immediate maternal mortality was found to be 30 per cent., the prognosis improving the further along in pregnancy the woman is at the time of the first breakdown in circulatory balance. The great mortality for the child is dependent on prematurity and the frequent necessity for artificial delivery. The metabolism of the child is not affected by the uncompensated maternal heart *per se.* As to prophylaxis, besides the treatment of endocarditis during the stage of compensation, emphatic instruction should be given to students and practitioners that pregnant women with chronic valvular disease must lead a quiet, regulated life. No undue exertion, such as long walks, climbing the stairs, or long journeys should be attempted. The passions must be controlled; anger or any emotional excitement is especially to be avoided. The medical treatment in broken compensation is similar to that of cases in non-pregnant women. The treatment mentioned includes digitalis, strophanthus, caffein, calomel and the salines, precedent to heart stimulation, morphin and codein for dyspnea and insomnia, also chloral; nitroglycerin, rectal injections of physiologic salt solution in suppression of urine, oxygen in sinking spells and cyanosis and dry cupping of the sides and back of chest in dyspnea from pulmonary edema and in suppression of urine. The obstetrical treatment is fully discussed. Induction of labor with merely chronic endocarditis is mentioned only to be condemned, and should be considered only when compensation fails. Even in these cases rest in bed and medicine should first be given a trial for from 5 to 10 ten days. Labor should be induced (a) if, though the symptoms improve somewhat with rest in bed and the usual therapeutic measures, the compensation does not promptly become restored; (b) if the compensation once lost has been regained, when it may be done

at the thirty-sixth week to secure easier labor; (c) if the compensation fails markedly before the sixth month; (d) in desperate or moribund cases, in the interest of the child. Here *accouchment forcé* with rapid manual dilatation of the cervix, or vaginal hysterotomy, is frequently justifiable. He describes the method of inducing premature labor and the management of the second and third stages of labor. The baby, whether premature or full term, should be given to a wet nurse. Chronic valvular disease is in itself not necessarily a serious condition in the child-bearing woman.

50. **Tuberculosis, Pregnancy and Parturition.**—Lobenstine's paper is written to combat the old time superstition that pregnancy is beneficial or at least not harmful to a woman possessed of a tuberculous pulmonary lesion, and to present the very serious and baneful effects of pregnancy and parturition on tuberculous subjects. The paper is based on 100 cases. He cites illustrative cases, and reproduces Osler's considerations on the relation of tuberculosis and marriage. Regarding general management he emphasizes *inter alia* the following points: The obstetrical treatment depends on the time in pregnancy at which the patient comes under observation. During the first three or four months artificial abortion should be resorted to after due care and deliberation, in the majority of cases. After the first three or four months, (a) pregnancy should be allowed to continue if the patient is holding her own fairly well; (b) if the case was only moderately severe at the beginning of pregnancy and the patient is losing ground, pregnancy should be interrupted; (c) if the case is a bad one, interruption of pregnancy is of no real value: in fact, in the patients losing ground rapidly it merely tends to hasten their death. Labor should always be made as easy as possible, particularly the second stage, which, as a rule, should be assisted with forceps or version. Little anesthesia should be used, and, when used, is advantageously combined with oxygen.

Journal of Abnormal Psychology, Boston

December-January

52 *The Seat of Consciousness. F. Peterson, New York.
53 *An Introspective Analysis of Conscious Life (continued). By a Co conscious Personality. (B.)
54 *The Unconscious (continued). M. Prince, Boston.

52. Abstracted in THE JOURNAL, Nov. 28, 1908, p. 1893.

53. **The Co-Conscious Life.**—This is a continuation of the article in the preceding issue (abstracted in THE JOURNAL, January 30, 1909) in which the subject herself describes her life as a dissociated personality. She now describes the genesis of dissociation, her co-conscious life, the content of the co-consciousness, its separateness and continuity and emotion, its relation to the other personalities, its ability voluntarily to influence the personal consciousness, and its involuntarily influence thereon, and the nature of its dreams.

54. **The Unconscious.**—A survey of the facts related by Prince brings out into strong relief the important principle that no matter in what state complexes are formed, so long as they are conserved they become a part of our personality. They become dormant, but, being conserved they may, under favorable conditions, become awakened and enter our conscious life. It matters not whether complexes have been formed in our personal consciousness or in a state of hypnosis, in dreams, in conditions of dissociated personality, in co-consciousness, or any other dissociated state; they are all parts of ourselves, and may afterward be revivified, whether volitionally or automatically. Through the formulation of the conception of the subconscious as resolvable, on the one hand, into the unconscious or complexes conserved as passive physiologic residua, and, on the other hand, into coactive conscious states, all the so-called subconscious phenomena known to date are intelligible. It offers a basis for comprehensible theories of memory, suggestibility, posthypnotic phenomena, dreams, automatic writings and similar phenomena, artificial hallucinations, the dissociative and automatic phenomena of hysteria, and, to a large extent, the mechanism of thought. Aside from certain artificial and pathologic conditions, there is no normal subconscious self, or subliminal self, or secondary self, or hidden self, properly speaking.

Journal of Advanced Therapeutics, Rahway, N. J.

December

55 *Disruptive High-Frequency Discharges, by Reaction Method, as a New and Important Therapeutic Agent. M. W. Brinkmann, New York.
56 *Treatment of the Enlarged Prostate by the High-Frequency Current. M. M. Johnson, Hartford, Conn.
57 Treatment of Varicose Veins and Varicose Ulcers by the Static Wave Current. H. Finkelpearl, Pittsburg, Pa.
58 Cataphoric Operations as Modified by the Topographic Situation of Particular Neoplasms, with Detailed Report of Cases. G. B. Massey, Philadelphia.

55 and 56. Abstracted in THE JOURNAL, Nov. 28, 1908, p. 1890.

Journal of the Arkansas Medical Society, Little Rock

December

59 *Surgical Treatment of Retroflexion. W. H. Miller, Little Rock.
60 *Immediate Repair and After-Treatment of Lacerations of the Perineum. W. A. Snodgrass, Little Rock.
61 *Skin Lesions as Danger Signals. N. Klein, Texarkana, Tex.
62 The Doctor's Wife. S. Dickson, Paragould.

59, 60, 61. Abstracted in THE JOURNAL, July 18, 1908, pp. 249, 250.

Cleveland Medical Journal

December

63 *Case of Traumatic Asphyxia. R. A. Bolt, Cleveland.
64 Forty-two Consecutive Abdominal Hysterectomies for Uterine Fibroids. F. E. Bunts, Cleveland.
65 Drugs in Cardiac Therapy. J. B. McGee, Cleveland.
66 Acute Pericarditis Following Removal of Gonorrheal Pyosalpinx. J. L. Bubis, Cleveland.
67 Clean Milk. C. Christadoro. San Diego, Cal.

63. **Traumatic Asphyxia.**—Bolt describes at length a case of traumatic asphyxia. He reviews the literature of the subject, and summarizes it in tabular form. He discusses in detail the clinical findings in the reported cases and the underlying mechanism and pathologic changes, particularly in relation to the discoloration of the neck and face. He says that the mild and incomplete forms approach closely true asphyxia with cyanosis. Powerful thoraco-abdominal effort on the part of the patient may be sufficient to produce the incomplete form, but to cause a traumatic asphyxia there must be a severe and sudden compression of the abdomen and thorax for a sufficient period to suspend respiration, and at the same time force the carbonized blood largely into the veins and capillaries of the cervicofacial region. This is favored by the lack of competent valves in the veins leading from the head, and the protection which the well-formed valves give to the trunk and extremities. The sudden reflex of blood causes a dilatation of the venules and capillaries. Pressure on the abdominal and thoracic sympathetic plexuses may add to the effect of dilatation and cause a temporary paralysis of the vessel walls. A condition of venous stasis is thus favored which gives rise to the peculiar discoloration. In most cases no injury has been caused to the vessel walls, and the blood has been confined to the vessels. But from authentic reports, we must conclude that the condition may become so severe as to cause a diapedesis, or even extravasation of the blood in certain regions of the face and neck.

California State Journal of Medicine, San Francisco

December

68 *Hematuria. G. MacGowan, Los Angeles.
69 Pentoses. A. H. Jones, Los Angeles.
70 *Postoperative Treatment. O. D. Hamlin, Oakland.
71 Opsonic Index and Vaccine Therapy. R. Bine, San Francisco.

68. **Hematuria.**—MacGowan discusses systematically hematuria arising respectively from the anterior urethra, the posterior urethra and prostate, the seminal vesicles, the bladder, the ureter and the kidneys, and cites numerous cases illustrating the various forms and their causes.

70. **Postoperative Treatment.**—Hamlin points out that the surgeon's responsibility does not end with the laying down of the scalpel, but continues until convalescence has set in. The purpose of after-treatment is to prevent complications; failing this, to recognize them early and to treat them intelligently, so as to secure, not only recovery, but the best functional results. He discusses the postoperative posture of the patient and thinks the traditional dorsal posture subject to many rational objections. He urges the right side posture when the patient is taken from the operating room or begins

to recover from the anesthetic, cases requiring, for technical reasons, special posture being of course excepted. For anesthetic vomiting he recommends large draughts of water containing some alkali, such as sodium bicarbonate. After lavage of the stomach, cocain hydrochlorid, grain 1/12 (0.005 gm.) bismuth subnitrate, grains 5 (0.032 gm.) and cerium oxalate, grain ½ (0.03 gm.) may be given dry, on the tongue. Sometimes it is useful to spray the nostril with 4 per cent. cocain solution. Finally, he discusses at length postoperative shock under four different classes, namely that due respectively to vasomotor depression, hemorrhage, the toxic effect of the anesthetic, and mental disturbance, psychic shock. This last is particularly likely to occur in neurotic and alcoholic patients, children, and others of timid nature.

Detroit Medical Journal

December

72 *Prophylaxis of Cancer. T. A. McGraw, Detroit.
73 The Climate Controversy. E. S. Bullock, Silver City, New Mexico.

72. Prophylaxis of Cancer.—McGraw says that we may reasonably conclude that, though in our ignorance of the fundamental cause of malignant degenerations we have no certain means of prevention, we may, nevertheless, hope to forestall its development, in many cases, by curing pathologic conditions which act as exciting causes. Surface cancers are largely due to injuries, chronic irritations, inflammations and ulcers, which destroy the resisting power of the tissues and stimulate the development of cancer germs. The neglect of such troubles, therefore, especially in persons of middle and old age, may result in disaster. We should therefore see to it that men and women approaching middle life are cured of such troubles. Uterine lacerations should be repaired, gallstones removed, chronic gastric ulcers operated on, and chaps and indurations of the lower lip and ulcers in the mouth excised. Wherever a morbid spot shows itself on the skin or mucous surfaces, it should be made the subject of careful consideration and treatment. By so doing we may reasonably expect to prevent the development of cancerous troubles in such localities. In the deeper seated cancers springing from the glandular epithelium, we have to regret in most cases the absence of all previous indications of local disease. All we can do is to learn to recognize them at the very earliest period when thorough excision may possibly remove all metastatic cells. We must not forget the part played by certain benign tumors in affording a suitable ground for the generation and development of malignant tumors. This teaches us to insist in the absence of positive contraindications on the removal of all tumors, however innocent in appearance and character, as soon as they appear.

Journal of Inebriety, Boston

Winter, 1908

74 The Influence of Narcotics on Metabolism. W. S. Hall, Chicago.
75 *General Principles of the Treatment of Habitual Drunkards. T. C. Shaw, London, Eng.
76 Influence of Alcohol and Autotoxicosis on Nervous and Mental Diseases. G. H. Benton, Chester, W. Va.
77 The Physician and Alcohol. Prof. M. Kassowitz, Vienna, Austria.
78 Alcohol an Important Factor in the Etiology of Mental and Nervous Diseases. D. R. Brower, Chicago.
79 Alcoholic Insanities. A. Gordon, Philadelphia.
80 The Pauper Inebriate *from a* Medical and Legal Standpoint. L. D. Mason, Brooklyn.

75. Published in the *British Medical Journal*, Sept. 19, 1908

Journal of Infectious Diseases, Chicago

December

81 Plague Among the Ground Squirrels of California. W. B. Wherry, Oakland, Cal.
82 Rat Leprosy and the Fate of Human and Rat Lepra Bacilli in Flies. W. B. Wherry, Oakland, Cal.
83 Streptococci *Occurring as* Diplococci in Rats. W. B. Wherry, Oakland, Cal.
84 Experiments on Use of *Bacillus Pestis Caviæ* as a Rat Virus. W. B. Wherry, Oakland, Cal.
85 Experiments on the Germicidal Action of Cow's Milk. P. G. Heinemann and T. H. Glenn, Chicago.
86 Pyocyaneus Infections, with Report of Two Rare Cases. H. H. Waite, Lincoln, Neb.
87 Method for the Staining of Negri Bodies. D. L. Harris, St. Louis, Mo.
88 The Occurrence of Thermostable and Simple Bactericidal and Opsonic Substances. A. Hamilton, Chicago.
89 Effect of Injections of Homologous Streptococci, Killed by Heat, in Streptococcus Complications in Contagious Diseases. G. H. Weaver and R. Tunnicliff, Chicago.
90 Streptococcus Immunization. G. H. Weaver and R. Tunnicliff, Chicago.
91 Injections of Heterologous Streptococci, Killed by Galactose, in Erysipelas and in Scarlet Fever. G. H. Weaver and T. H. Boughton, Chicago.
92 Simple Synthetic Media for the Growth of *B. Coli* and for its Isolation from Water. M. L. Dolt, Providence, R. I.

Interstate Medical Journal, St. Louis

December

93 Conservative Methods of Treatment of the Inflammatory Diseases of the Tubes. P. Findley, Omaha, Neb.
94 Persistent Sinus After Nephrectomy. W. C. Kirchner, St. Louis.
95 Examination of the Stools of Infants. J. Zahorsky, St. Louis.
96 Fat Incapacity in Young Infants. A. S. Bleyer, St. Louis.
97 Case of Jonathan Swift. G. M. Gould, Ithaca, N. Y.

Journal of the Kansas Medical Society, Kansas City

December

98 *Dieto-therapy of Acute Fevers. C. F. Menninger, Topeka.
99 Screw Worm Disease (Myiasis). Z. Nason and G. H. Hoxie, Rosedale, Kan.
100 *Opportunity and Duty* of the Kansas Medical Society. W. H. Graves, Wichita, Kan.

98. Dieto-Therapy of Acute Fevers.—Menninger discusses the classification of diseases having fever, and the application of diet to etiologic therapy, antipyresis, stimulation, and its influence on kidney function, the digestive tract, and metabolism. He concludes that the fever patient should receive a liberal supply of food; thereby the burning up of non-nitrogenous substances of the body will be prevented and at the same time provision will be made that the cells shall retain that albuminous tissue which would be destroyed if not enough non-nitrogenous food were given. Abundant supply of nourishment will limit the fever consumption, but diet in acute fevers will never be able completely to cover the loss, let alone to make an increase over and above the loss.

Laryngoscope, St. Louis

December

101 Rhabdomyoma of the Nose. D. T. Vail, Cincinnati.
102 *Relationship Between Degenerate Tonsils and Middle Ear Deafness. J. N. Reik, Baltimore.
103 Postoperative Effects of the Stacke Operation. J. F. McKernon, New York.
104 **Value of Differential Blood Count and of Bacteriologic Examination of Aural Discharge as Diagnostic Factors in Cases of Mastoid Involvement.* E. B. Dench, New York.
105 *Rhinoscleroma in North America. E. Mayer, New York.
106 Case of Primary Sarcoma of the Nasopharynx. J. F. McCaw, Watertown, N. Y.
107 Tuberculous Ulceration of the Petiolus Region of the Epiglottis. T. J. Reardon, Boston.
108 Improvement of Technic in Various Sinus and Mastoid Operations. J. R. Fletcher, Chicago.
109 Osteochondroma of the Septum with Extensive Absorption of the Cribriform Plate; Tumor Extruding into the Cranial Cavity, Sphenoidal and Ethmoidal Cells. R. C. Myles, New York.

102. Degenerate Tonsils and Deafness.—Reik emphasizes the importance of carefully looking for diseased tonsils, and getting rid of them completely when found, in all cases of beginning or progressive middle-ear deafness; not that their enucleation will always arrest the progress of the condition or cure it, but that it will eliminate at least one of the possibly important factors in its production.

104. The Blood Count in Mastoid Disease.—Dench believes that we may safely say that an increased polymorphonuclear percentage and an increase in the leucocyte count, are of absolutely no value in determining the presence of pus in the mastoid in doubtful cases. When these variations from the normal blood count occur in aural cases, we must look for one of the three conditions: (1) Some visceral lesions; (2) some involvement of the soft tissues in the immediate vicinity of the wound; (3) some involvement of the intracranial structures, either of the brain substance or of the lateral sinus. It should be particularly borne in mind, as is clearly demonstrated by the statistics, that in certain instances, a thrombosis of the lateral sinus may occur, in which the polymorphonuclear count will not rise above 80 per cent., and in which the leucocytosis will not be greatly increased. The surgeon must still rely on clinical signs of involvement of the mastoid and of the intracranial structures, and must put the bacteriologic examination of the discharge and the differential blood count in a secondary place, in arriving at his diagnosis.

105. **Rhinoscleroma in America.**—Mayer says that rhinoscleroma, an unusual affection at least in this country, but endemic in Poland, is contagious to a degree and may involve the external and internal nose, the pharynx, larynx or either one with the other of those parts. The total number of undoubted cases of the affection reported by Dr. Friedberg as occurring in the United States, was 16; of these 13 were females and 3 males; the youngest patient was 9 years old and the oldest 54 years old: the average age was 30 years. Of this number the nose only was involved in 4 cases, the nose, pharynx and larynx in 2 cases, the nose and larynx in 4 cases, and the nose and pharynx in 6 cases. In all the cases, the affection had its beginning before the patients came to this country, all came from some part of Poland, and no authentic case originating in the United States has been found.

Monthly Cyclopedia and Medical Bulletin, Philadelphia

December

110 *Causes of Mortality from Heart Disease in the United States. T. Darlington, New York.
111 *Tuberculosis in the Insane. F. Woodbury, Philadelphia.
112 Systemic Infection Through the Tonsils. R. B. Scarlett, Philadelphia.
113 Parenchymatous Nephritis and Multiple Verruca (Warts). J. V. Shoemaker, Philadelphia.
114 Some Gynecologic Abnormalities. J. A. McGlinn, Philadelphia.
115 Don't Swallow the Enemy—Don't Touch the Enemy—Don't Breathe the Enemy. F. T. Woodbury, U. S. Army.

110. **Mortality from Heart Disease.**—Darlington recapitulates impressions gained from a study of heart disease in the United States as follows:

1. The mortality rate from heart disease is steadily increasing.
2. This increase is general throughout the United States and is apparently unaffected by climate conditions, locality or density of population.
3. The correlated condition, chronic Bright's disease, shows a corresponding increase in mortality.
4. The general death rate is steadily decreasing.
5. No other disease shows a general relative increase in its deathrate.
6 The commonly accepted cause of cardiac affections can not be held responsible for the increased death rate without further study of their etiology.
7. The effect produced by high-strung nervous tension, induced by modern methods of social and business competition, must be regarded as a causative factor in the production of functional and ultimately organic cardiac disease.
8 The medical profession has before it an opportunity of great vital moment in teaching the doctrine of right living, advocating a saner and more wholesome attitude toward life, and standing as a unit against the false standards of material gain and advancement obtained by the sacrifice of the normal, healthful and peaceful attributes of calm mental poise, equable temperament and physical well-being.

111. **Tuberculosis in the Insane.**—Woodbury makes a plea for the humane treatment of dying tuberculous insane patients. There is a group of cases in which consumption must be regarded not so much as a disease as a mode of dying. In such cases, among sane or insane, curative treatment necessarily harsh and invigorating is out of place.

New York State Journal of Medicine, New York

December

116 Medical Journalism. J. P. Warbasse, Brooklyn.
117 Hysteria and Allied Neuroses N. A. Pashayan, Schenectady.
118 Present Status of the Calmette Reaction. I. W. Voorhees, New York.

New Orleans Medical and Surgical Journal

December

119 *Pellagra in the Southern States. G. H. Searcy, Tuscaloosa, Ala.
120 Nervous Hygiene and the Control of Nervous Impulse. E. M. Hummell, New Orleans.
121 Tuberculosis Clinics and Dispensaries. S. E. Chaillé, New Orleans.
122 *Roentgen-Ray Diagnosis of Diseases of Bones and Joints. A. Granger, New Orleans
123 *Recurrent Gonorrhea in Married Men. C. W. Allen, New Orleans
124 Case of Anterior Poliomyelitis. L. L. Cazenavette, New Orleans.
125 Prophylaxis of Gonorrhea. F. J. Chalaron, New Orleans.

119. Commented on editorially in THE JOURNAL, Jan. 2, 1909, p. 54.

122. Published in the *Journal of Advanced Therapeutics*, November, 1908.

123. **Recurrent Gonorrhea in Married Men.**—Allen criticizes the prevalent custom of treating recurrent symptoms of gonorrhea with a syringe and internal sedatives, and ceasing with the disappearance of discharge. He cites cases indicating that much morbidity in married women is due to outbreaks in the husband of a supposedly cured gonorrhea. He insists that the majority of cases in primary infection result in a posterior urethritis far oftener than is generally supposed. Such cases are not to be cured by merely placing a syringe in the hands of the patient. They tend to subside, only to recur later from various existing causes.

Old Dominion Journal of Medicine and Surgery, Richmond, Va.

December

126 *Application of the Obstetrical Forceps—a Plea for Restraint. B. Lankford, Norfolk, Va.
127 Several Unusual Forms of Superficial Inflammation of the Cornea. W C. Posey, Philadelphia.
128 Case of Sporadic Cretinism. J. B. Nowlin, Buckingham, Va.
129 Conclusions Concerning Typhoid in the South, as Deduced From a Study of Typhoid in Richmond, Va. (concluded). E. C. Levy and A. W. Freeman, Richmond.
130 Typhoid Bacillus Carriers. St. G. T. Grinnan, Richmond.
131 New Treatment for Hypertrophied Prostate. J. W. Hunter, Norfolk.

126. **Application of Forceps.**—Lankford believes that forceps are used to-day too frequently, and with not sufficiently potent reasons. We should be guided by two, and only two, reasons for applying forceps; the ultimate good to the mother or to the child, and the mother should have the preference. Pelvimetry should be practiced in all primiparous pregnancies and should be found a great help. The lateral position for both simple and forceps cases, especially with the Neville (Irish) forceps, has marked advantages over the dorsal because of greater precision, stricter cleanliness and simpler technic.

Ophthalmic Record, Chicago

December

132 Increased Tension in Ocular Diseases of Infancy and Childhood. J. E. Brown, Columbus, O.
133 The Sphenoidal Sinus as a Possible Etiologic Factor in the Production of Retrobulbar Neuritis from an Anatomic Standpoint. L M. Francis and J. A. Gibson, Buffalo, N Y.
134 Family Exophoria. W. Reber, Philadelphia.
135 Innovations in the Operative Treatment of Persistent Glaucoma. Study of Substitutes for Iridectomy. P. Fridenberg, New York.
136 Report of Corneal Case. J. W. Kimberlin, Kansas City, Mo.
137 Pyramido-Zonular Cataract. B. Chance, Philadelphia.
138 Tuberculosis of the Eye. F. H Verhoeff, Boston
139 Ophthalmic and Aural Laboratory Diagnosis. D. M. Campbell, Detroit.
140 Congenital Cataracts with Calcareous Deposits. S. Mitchell, Hornell, N. Y.

Archives of Pediatrics, New York

December

141 Case of Incomplete Heterotaxy, with Unusual Heart Malformations. B. F Royer and J. D. Wilson, Philadelphia.
142 *Causative Factors of the Paralyses of Early Life. R. S. Haynes, New York
143 Diagnosis of Paralyses of Early Life. E. G. Zabriskie, New York.
144 *Electrotherapy in Paralyses of Early Life. T. A. Romeiser, New York
145 *Surgical Treatment of the Paralyses of Early Life. R. H. Sayre, New York
146 Mechanical Treatment of the Paralyses of Early Life. W. R. Townsend, New York
147 Two Cases of Herniotomy for Strangulated Inguinal Hernia in Infants A P. C Ashhurst, Philadelphia
148 Adenoid Vegetations from the Standpoint of the Pediatrist. J. E Hunt, Kansas City, Mo.
149 *Infantilism (Lorain Type). A. Hymanson, New York.

142. **Paralyses of Early Life.**—Haynes emphasizes the facts that paralyses in early life may be due to lesions in any part of the motor tract; that they may be caused by any one of several factors; that a number of clinical affections which cause paralysis exist, but that poliomyelitis and cerebral lesions cause an overwhelming majority of the cases.

144. **Id.**—Romeiser strongly emphasizes the fact that the time when electrical treatment should begin is of some importance. Too soon may do harm. Not before the inflammatory process in the cord has subsided before all irritative phenomena of pain and tenderness have disappeared, should there be any electrical stimulation—in most cases not before the end of the first month. In mild cases, earlier, say about the third week.

145. **Id.**—Sayre discusses stretching the shortened muscles, tenotomy tendon transference, and nerve transference. With regard to the last, his own experience has not been satisfactory, and with regard to the experience of others in those cases that he has seen, the results did not appear so good to

him as to those who operated. Sayre feels that the operation should be tried in suitable cases, but he does not feel that it has yet been shown that a nerve paralyzed for a long time can be regenerated by splicing it to a live one.

149. **Infantilism.**—Hymanson reports a case of the Lorain type and discusses the differences between that and the myxedematous type. In the first type deficient or abnormal function of the thyroid is always present; in the second there is defective arterial development, causing insufficient nourishment of the tissues. Hymanson points out that a skiagraph of the hand is of great importance in differentiating the myxedematous from the Lorain type. If there is a deficiency in the appearance of the nuclei of the carpal bones, and also failure of the metacarpals or phalanges to unite, then the case belongs to the myxedematous type and the thyroid treatment is indicated; but in the Lorain type, where ossification is premature, thyroid treatment is of no value.

Southern Medical Journal, Nashville

December

150 *Larval Tapeworm in Human Flesh. H. Gates, Manatee, Fla.
151 Radical Anorectal Surgery Without General Anesthesia. A. B. Cooke, Nashville.
152 Present-day View of Arteriosclerosis and Its Significance. A. G. Brown, Richmond, Va.
153 *Anorexia. G. M. Niles, Atlanta, Ga.
154 Modern Methods in Diagnosis of Diseases of the Digestive System. C. P. McNabb, Nashville, Tenn.
155 Case of Fracture of the Base of the Skull. J. W. Alsobrook, Plant City, Fla.
156 Expert Testimony and the Medical Witness. L. M. Crafts, Minneapolis.

150. **Larval Tapeworm in Human Flesh.**—With a few introductory lines Gates republishes the paper of C. W. Stiles, read before the International Dermatological Congress, 1907, and abstracted in The Journal, Oct. 12, 1907, p. 1305. The paper was published also in *Journal of Cutaneous Diseases*, August, 1908.

153. Abstracted in The Journal, Dec. 5, 1908, p. 1994.

St. Paul Medical Journal

December

157 Postoperative Treatment. H. J. O'Brien, St. Paul.
158 Acute Suppuration of the Middle Ear with Mastoiditis. E. W. Benham, Mankato.
159 Simple Atrophy of Infants, and Its Relation to Food. W. R. Ramsey, St. Paul.
160 *Sick Room Helpers. H. Sneve, St. Paul.
161 Ocular Tuberculin Reaction. H. W. Miller, Jamestown, N. D.

160. **Sickroom Helpers.**—Sneve faces the fact that the extent of the training and qualifications of trained nurses in the present day places them out of the reach of approximately 80 per cent. of the population. He describes a plan recommended by a committee of the Ramsey County Medical Society, to provide for $10.00 a week trained sick-room helpers. Let training schools so arrange their work that the whole field is essentially covered in the first year; those women worthily completing this course should receive a certificate as sick-room helpers and the privilege of going out and caring for the sick. All those desiring to enter the profession of trained nurse should be required to take two years' training. This will give opportunity for more careful culling of the material that should finally qualify in the nursing profession as registered nurses.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal

January 16

1 Alpine or Home Climates for Early Tuberculosis? W. Ewart.
2 Selection of Sanatorium Cases for Treatment with Tuberculin. H. H. Thomson.
3 Contusion of the Lung without External Injuries. E. M. Payne.
4 *The Body Weight in Relation to Pulmonary Tuberculosis. F. P. Weber and W. R. Kirkness.
5 *Asthma: Causation and Treatment. W. Lloyd.
6 Pancreatic Diabetes Associated with Dilatation of Stomach, for which Gastroenterostomy has Been Performed. J. S. McKendrick.
7 Causation of Ingrowing Toenail. G. A. Stephens.
8 *Effective Treatment of Acute and Subacute Rheumatism. D. B. Lees.
9 Primitive Muscle Tissue of the Human Heart. A. Gibson.
10 Difference in Content of Immune Substances in Blood Serum and Plasma. G. Dreyer and E. W. A. Walker.
11 Production of Immune Substances. G. Dreyer and E. W. A. Walker.
12 *Industrial Syphilis. C. Belcher.

4. **Body Weight and Pulmonary Tuberculosis.**—Weber and Kirkness detail a series of observations at the Mount Vernon Hospital for diseases of the chest, undertaken to ascertain the average weight of consumptive patients: (1) In comparison to their height; and (2) in comparison to the average of their former weights. They found a decided preference for tuberculosis in underweights, less marked in females.

5. **Asthma.**—Lloyd holds that the only theory as to the causation of asthma that can be successfully maintained in the present state of our knowledge is that it is essentially a nervous disease due to spasm of the bronchial muscles induced reflexly by irritation of either the nasal mucous membrane or the alimentary canal, the former being the commonest. There are three factors in its causation, namely, (1) the presence of hypersensitive areas in the nasal mucous membrane or a special sensitiveness of the gastric mucous membrane; (2) a special irritability of the pulmonary nervous system, which constitutes the asthmatic idiosyncrasy with which the individual was born; (3) the presence of an irritant—for example, odors, dust, smoke, etc.; or errors in diet when of gastric origin. The absence of any one of these factors is sufficient to prevent the disease. In the treatment of the paroxysm search should be made for the exciting cause, and when found it should be removed if possible. If the atmosphere contains anything irritating the patient must be removed. The best posture is in an armchair before a table with a cushion on it, so that the patient can rest his elbows and throw himself forward. Ipecac powder, administered early, often cuts short an attack for the rest of the night. A pipe of tobacco acts admirably on some patients. Coffee, very hot and strong, and without sugar and milk, is an effectual remedy. Alcohol, chloroform and cocain are valuable remedies. Other remedies mentioned are stramonium smoking and the fumes of burning nitre paper. Potassium iodid, in the author's experience, has given very little relief. An asthmatic should dine early, 5 p. m., at the latest if he goes to bed at 10, and the food should be nutritious, easily digestible, plain, well cooked and containing the proper proportion of animal and vegetable elements. Rectification of disease or deformity of the nose is important. When such is not present, cauterization of the asthmogenic areas must be practiced. Common salt solution is the best nasal cleanser; other salts are irritating.

8. **Rheumatism.**—Lees lauds the use of sodium salicylate in large doses, combined with double the amount of sodium bicarbonate to each dose. He controverts the idea that pure sodium salicylate is a cardiac depressant. We must give up the conception of acute rheumatism as a form of arthritis of adults, with occasional metastasis to the heart and with certain "peculiarities" when it occurs in childhood, and insist on it as a microbic toxemia, most virulent in early life, in which the heart is invariably affected to a greater or less degree, and the joints lightly or not at all. It is desirable to administer salicylate and bicarbonate of sodium, combined, in frequent, but at first moderate doses, say every two hours from 6 a. m. to 10 p. m. The amount of each dose should be increased daily, or every second day, until unpleasant by-effects—e. g., vomiting, deafness, tinnitus, vertigo, etc.—are observed. Drowsiness in children or an acetone odor or acetonuria, with slowing and deepening of respiration, are danger symptoms. They may be entirely prevented by the relief of constipation and the use of sufficient sodium bicarbonate to render the urine alkaline. The initial dose of sodium salicylate for an adult may be 15 grains, or 150 grains daily; for a child of from 7 to 12 years, 10 grains, or 100 grains daily; for a child younger than 7, 5 grains, or 50 grains daily, given in each case with twice the amount of sodium bicarbonate. The daily increase of dose may with advantage be from 2 to 5 grains, in the individual dose—that is, from 20 to 50 grains in the total amount given daily. The

increase in the dose should be progressive until the evening temperature is and remains normal. The amount needed for a child may be nearly as great as for an adult, for in a child the infection is more virulent and renal elimination is more active. In some mild cases of acute and subacute rheumatism it may be sufficient to increase the dose of the salicylate to 150 grains daily, but in many it is desirable to increase it to 200 or 250, and in some severe cases to 350 or 400 grains. Chorea often requires from 250 to 350 or even 400 grains.

12. **Industrial Syphilis.**—Belcher describes a case of syphilis contracted by a coatmaker, from the habit of pressing the cloth she was working on against her chin. The worker from whom she received garments, who had been previously working on them, was a syphilitic. Belcher urges that syphilis should be made notifiable.

Lancet, London

January 16

13 *Thrombosis and Embolism After Operations on the Female Pelvic Organs. J. Bland-Sutton.
14 Combination of Substances which Excites Ameboid Movement in Leucocytes, by which Living Can be Differentiated from Dead Cells. H. C. Ross.
15*An Excitant for the Leucocytes of Healthy Persons Found in the Blood Plasma of Patients Suffering from Carcinoma. C. J. Macalister and H. C. Ross.
16 Ileosigmoidostomy for Relief of Inveterate Constipation. C. W. M. Moullin.
17 New Method of Orchidopexy. M. Mamourian.
18 Fibrolysin in Ophthalmic Practice. K. Grossmann.
19 *An Efficient Treatment for Pneumonia. D. Crowly.
20 New Parasite Seen in a Case of Dysentery. J. Bell.
21 *Mumps. J. G. Sharp.

13. **Thrombosis and Embolism After Pelvic Operations.**—The main object of Bland-Sutton's Hunterian lecture is to consider the mode of origin of those blood clots which are big enough, when detached from the veins in which they are formed, to occlude the pulmonary artery with fatal effects. It is necessary to appreciate the fact that thrombosis is in reality a defensive action of the blood. In collecting material Bland-Sutton's chief object was to find out the causes of thrombosis besides sepsis, but a study of the conditions underlying the formation of thrombi in the great veins after pelvic operations convinces him that sepsis is responsible for all. He discusses the course of postoperative thrombosis in regard to the saphena vein and the ovarian vein, and considers in detail embolism of the pulmonary artery, describing its signs, and the operative treatment as instituted by Trendelenburg. He insists on the fact that the detachment and transit of the clot are usually preceded by movement—getting out of bed for the first time after operation, even sitting up in bed, but more particularly straining during defecation. On this ground Bland-Sutton, in common with most British surgeons, is opposed to the practice of allowing patients to get out of bed a few days after such operations. Under the most favorable conditions he keeps his patients confined to bed for two weeks, and in no case is a patient allowed to get up until her temperature has been normal for at least three days. Pulmonary embolism occurs much more frequently after abdominal hysterectomy for fibroids than after any other operation, and is especially liable to happen in women who are profoundly anemic from profuse and prolonged menorrhagia, due to the presence of a submucous fibroid. He insists on the most painstaking care in the preparation of ligature material and in the use of sterilized rubber gloves over thoroughly washed hands in pelvic operations.

15. **Excitation of the Leucocytes in Patients Suffering from Carcinoma.**—Macalister and Ross direct attention to the possibility of cancer being the local manifestation of a disease which is dependent on changes in the blood, difficult to account for, but yet so constant that their association with the neoplasm can not be disregarded. This consideration led to the application of a method (detailed in the preceding paper by Ross) for distinguishing dead leucocytes from living ones by the fact that live cells resting on agar jelly that contains, besides neutralized sodium citrate and sodium chlorid, a certain proportion of methylene blue and atropin sulphate, will exhibit exaggerated ameboid movements. The stain is the most important constituent of this excitant. In neutral jelly the excitation somewhat inconstantly occurs without addition of the alkaloid, but on the addition of an alkali in amount proportionate to the temperature of the room sufficient to produce diffusion of the stain, marked excitation occurs only when the alkaloid is present. Certain alkaloid-like toxemic symptoms found in cases of cancer suggested that in the blood of cancer patients there might be some substance which, in the presence of an alkaline plasma, acts as a stimulant to the normal cells, thereby in some way giving rise to the new growth. They had in the wards a patient with carcinoma of the pylorus, who, while not taking any narcotics, presented toxemic symptoms resembling those that might be produced by an alkaloidal poison. Ross had previously ascertained that the plasma of persons known to be suffering from carcinoma did not comparatively shorten the lives of the leucocytes of healthy persons, in contradistinction to the effects produced by the plasma of persons suffering from several infective diseases—this fact indicating that cancer is not an infective disease. The authors determined to ascertain whether the plasma of cancer patients contained any excitant, pathologic in character for the leucocytes of healthy persons. A large number of previous examinations had shown that leucocytes mixed with the citrated plasma of healthy persons never displayed exaggerated movements. The mixture of the citrated plasma of the cancer patient's blood with one-eighth of its volume of the blood of a healthy person, showed the remarkable movements, which were more marked than those seen when the artificial atropin excitant was used. It seemed, therefore, that there was actually a pathologic excitant in the blood of this cancer patient. Nine other cancer cases consequently were similarly investigated, the results corresponding in every way. The authors therefore consider that in cancer cases there may be present some substance resembling an alkaloid in its action, which, in the presence of an alkaline plasma, excites the ameboid movements of healthy leucocytes. They further point out that methylene blue is a coal-tar derivative, and that cancer is common in coal-tar workers. They suggest that this reaction, if confirmed by further investigation may prove useful in the differential diagnosis of cancer.

19. **Pneumonia.**—Crowly reports three cases, and refers to six others, of pneumonia, in which resolution in a surprisingly short time was effected by Ewart's treatment. (*Lancet*, Jan. 21, 1905, abstracted in The Journal, Feb. 18, 1905, p. 583.) In Crowly's practice an initial dose of calomel was followed by four-hourly doses of a mixture containing potassium iodid, 4 grains; potassium citrate, 10 grains; ammonium citrate, 8 ounces. The dietary was milk and water mixed, when it agreed, otherwise whey, and plenty of cold water to drink when the patient desired. A little brandy was necessary in only one case.

21. **Mumps.**—In summarizing his article Sharp emphasizes the following points:

1. Mumps is not a trifling affection.
2. The comparative frequency with which the pancreas is affected.
3. The suddenness with which abdominal symptoms may appear and the equal rapidity with which evidently serious symptoms pass away.
4. The area occupied by the swelling and tenderness in abdominal cases—namely, the epigastrium and left hypochondrium—that is the area occupied by the pancreas.
5. The comparatively slow pulse and low temperature (these may help one in distinguishing it from peritonitis, etc.).
6. The long period elapsing between the parotiditis and the vulvitis and the onset of pancreatitis in some of the cases (poison retained in the tissues).
7. Pancreatitis may be the first manifestation of mumps.
8. The possibility of pancreatitis replacing parotiditis in mumps.
9. Mumps may exist in a patient without affection of any gland so far as one can see.
10. Acute parotiditis is not a synonym of mumps, for mumps may be present without any apparent affection of the parotid gland.

Medical Press and Circular, London

January 13

22 Pneumonia in the Aged. Prof. R. Rimbaud.
23 How Much Proteid Does the Body Require? A. Haig.
24 *Intermenstrual Pain. J. S. Sheill.
25 Diagnosis and Treatment of Pneumonia in Children. G. A. Sutherland.

24. **Intermenstrual Pain.**—Sheill considers intermenstrual pain to be the result of the physiologic turgidity of the

ovaries, or of an ovary, due to circulatory changes. The reason that all ovulating women are not martyrs thereto is because patients are not alike in regard to their blood and blood vessels. Treatment will turn in the direction of checking excessive, or rectifying abnormal, local or general circulatory phenomena. In this connection, the salts of manganese are beneficial, this drug influencing the blood vessels. If chlorosis or other blood affections be present, iron may be required. Sheill recommends potassium permanganate pills in two-grain doses after each meal, the course of treatment extending from four to eight months, with slight remissions should stomach irritation supervene.

Clinical Journal, London

January 13

26 Chronic Pneumonia. J. Fawcett.
27 Villous Disease of Bladder. J. Bland-Sutton.
28 Diagnosis and Treatment of Sciatica. W. Harris.

Journal of Tropical Medicine and Hygiene, London

January 1

29 What is "Schistosoma Mansoni?" L. W. Sambon.

Practitioner, London

January

30 *Complications of Scarlet Fever. W. Hunter.
31 *The Heart in Scarlet Fever and Diphtheria. Sir J. F. H. Broadbent.
32 Renal Complications of Scarlet Fever and Diphtheria. N. Tirard.
33 Ocular Complications of Scarlet Fever and Diphtheria. J. H. Parsons.
34 Ear Complications of Scarlet Fever and Diphtheria. M. Yearsley.
35 Diagnosis of Scarlet Fever and Diphtheria. E. W. Goodall.
36 *Idem. H. E. Cuff.
37 Differential Diagnosis of Scarlet Fever. J. E. Beggs.
38 *Differential Diagnosis Between Rashes of Scarlatina, Diphtheria and Other Skin Eruptions. A. Whitfield.
39 The Convalescent Stage of Diphtheria. F. F. Caiger.
40 *Treatment of Scarlet Fever. A. K. Gordon.
41 Treatment of Diphtheria. C. B. Ker.
42 Diphtheritic Paralysis. J. D. Rolleston.
43 Tracheotomy. F. M. Turner.
44 Bacteriology of Scarlet Fever. M. H. Gordon.
45 Bacteriology of Diphtheria. R. T. Hewlett.
46 Antistreptococcus Serum in Scarlet Fever and Diphtheria. M. Young.
47 Scarlet Fever and Diphtheria from the Public Health Point of View. J. T. C. Nash.

30. **Complications of Scarlet Fever.**—Hunter divides the complications of scarlet fever into two groups as follows: 1. Those connected with the scarlatinal infection itself which are local in character, and are placed by the author in the following order in which he is accustomed to watch for them and to attach importance to them, namely, secondary angina, secondary adenitis, cellulitis, glandular suppuration, rhinitis and otitis. 2. Those connected with the septic infection with which scarlet fever is so often associated and by which in an altogether special degree it is so frequently aggravated; these are general in character, namely, albuminuria, nephritis, and rheumatism. The author gives the data for four years regarding these complications at the London Fever Hospital, which bring out two facts of great practical importance, viz., that while the general complications—albuminuria, nephritis, rheumatism and relapses—have from year to year remained fairly uniform in their incidence, the local complications, which more than any other determine the severity of the disease and are responsible for its chief fatal complications, such as septicemia, have steadily and uniformly diminished. This diminution Hunter attributes to certain stringent measures of antisepsis, namely, the increasing care taken to remove, as far as possible, immediately on admission, every trace of pre-existing septic *infection around the* patient's gums and teeth, and the keeping of it absent by daily swabbing with a 1 to 40 solution of carbolic acid throughout the early course of the disease. In regard to the second group, the two factors to which Hunter attaches chief importance in *relation to* nephritis are (1) exposure to sudden variations in temperature, and (2) allowing the patient to get up too soon. He now keeps every patient, however mild the case, in bed for three weeks.

31. **The Heart in Scarlet Fever and Diphtheria.**—Broadbent considers the incidence of endocarditis in scarlet fever apt to be overrated. Pericarditis is even less common. The presence of a systolic *mitral murmur* must *not* necessarily be taken as an *indication of endocarditis.* The effects of the scarlet fever toxin on the myocardium are similar to those of rheumatism. The most striking feature about the physical signs is the acceleration of the pulse out of all proportion to the severity of the fever, and beyond accounting for by dilatation of the heart, or explicable as being due to myocarditis. Broadbent thinks that we must attribute it to some disturbance of the nervous mechanism of the heart. Possibly the scarlet fever toxin has a special affinity for the special affinity of the vagus, *inducing a peripheral neuritis* or otherwise interfering with its inhibitory mechanism. The prognosis, apart from endocarditis or pericarditis, as regards cardiac complications, is usually favorable, and there is practically no risk of syncope, or sudden death, as happens in diphtheria. No special treatment is called for as a rule. In regard to diphtheria, *the condition of the cardiac muscle* alone does not appear to afford an adequate explanation for the *danger of cardiac syncope, which is better accounted for by* peripheral neuritis affecting the vagus, bearing in mind also that the heart muscle is damaged by the diphtheria toxin, and its tonicity and contractility are impaired. We thus expect a variety of disorders of rhythm. Tachycardia, approximation of the first and second sounds, spacing of the sounds, shortening and weakness of the first sound, and the "*bruit de galop*" are danger signals of the most grave order. Irregularity of pulse and intermissions are also of serious significance. Vomiting in the later stages is always a grave symptom. Endocarditis and pericarditis are rarely encountered. Prolonged and absolute rest in bed is essential when heart complications threaten in diphtheria, and small digestible meals should be given. Brandy and strychnin in suitable doses should be kept in reserve. Digitalis is of doubtful service.

36. **Diagnosis of Scarlet Fever and Diphtheria.**—Cuff says that if the patient is not seen till nearly the end of the first week, a diagnosis of scarlet fever is justifiable if any two of the following symptooms are present: The remains of a punctate erythema on the upper and inner aspect of the thighs; a peeled tongue; scarlatinal synovitis; infraclavicular pinhole desquamation. He states that there is a form of diphtheria which does not receive the attention it deserves, viz., fibrinous rhinitis. Clinically, this condition appears to give rise to no symptoms of ill health, and is recognized only by the small patch of glistening white membrane on the septum. For its detection the nose should be carefully dried, and light should be thrown into it by a mirror having a central aperture. Virulent diphtheria bacilli are always obtained in cultures made from these patches. The importance of fibrinous rhinitis lies in the fact that it may be the cause of severe faucial diphtheria in others, while the individual affected by it is not suspected of being the source of infection. It is an extremely mild form of primary nasal diphtheria, and in its course offers a strong contrast to those cases of nasopharyngeal diphtheria, in which the involvement of the nasal fossæ adds so greatly to the gravity of the illness.

38. **The Differential Diagnosis of Rashes.**—Whitfield offers the following provisional classification:

1. Eruptions occurring in infectious diseases other than the well-known eruptive fevers: Erythema of diphtheria; erythema of influenza; and erythema infectiosum ("scarlatinoid" of some writers).
2. Eruption of sepsis and other infective processes; erythema after operation, confinement or trauma (surgical scarlatina); erythema accompanying tonsillitis, erythema accompanying gonorrhea.
3. Eruptions from use of drugs, etc. (these are innumerable and only a few of the more important are noticed): erythema from enemata, antitoxic serum, *belladonna, quinin, mercury,* salicylic compounds, and veronal.
4. Eruptions of unknown cause: erythema scarlatiniforme; erythema scarlatiniforme recidivans.

With regard to the skin eruption in scarlatina he lays stress on the following points: 1. The rash invariably appears on the root of the neck. 2. When not absolutely universal, the edge of the eruption gradually fades off into the normal skin. The tip of the nose and the circumoral region are never affected. 3. The follicles may be lightly erected, but there is no true papule formation; on the *other* hand, the early eruption shows that the follicles are the chief seat of congestion. 4. A yellowish stain appears when the hyperemia is dispelled by pressure, and browning of the flexures of the elbows is almost invariably present. 5. The backs of the hands and the sides of the fingers are generally affected when the rash is fully out.

40. Treatment of Scarlet Fever.—Gordon discusses the treatment in uncomplicated cases of average severity, toxic cases (serotherapy), septic cases (local treatment), complications, and convalescence. The most efficient remedy for pain is packing the neck externally with ice bags. Lozenges of any description should not be given, for they cause swallowing of septic faucial secretion. To diminish absorption of the toxins from the fauces, Gordon uses a douche of warm water only, which may be rendered faintly alkaline with sodium bicarbonate and flavored with thymol; but flushing, not disinfection, is its object. The patient should lie on the stomach with the head projecting over the edge of the bed, the forehead supported by one hand of the nurse. At least two pints should be used for each irrigation. Gentle swabbing with a solution of borax is sometimes useful in adults, but the application of germicidal solutions should not be used, and neither the spray nor the paint brush has any legitimate place in the treatment. The nurse should wear rubber gloves when engaged in the treatment of the throat. A separate nozzle should be used for each patient. In toxic cases he discusses the use of serum, which should be polyvalent, sterile, and not more than six months old. From 50 to 100 c.c. should be given, and he has never seen any harm result therefrom. In septic cases, germicides should be used in as concentrated a form as possible, in small quantity, and should be applied with a swab. The douche also should be constantly used as before recommended. It is not advisable to incise enlarged and tender cervical glands unless definite evidence of fluctuation is obtained, so long as the skin over them is not affected. In septic, as distinguished from toxic cases, streptococcus serum should be avoided. Alcohol in Gordon's experience is usually both unnecessary and harmful in septic cases.

Glasgow Medical Journal

January

48 Problems Connected with Diseases of the Prostate. C. S. Wallace.
49 Pasteur. J. W. Mathie.
50 Pathology and Treatment of Extrauterine Pregnancy. S. J. M. Cameron.

Journal of Laryngology, Rhinology and Otology, London

January

51 Acute Middle-Ear Suppuration and Mastoiditis, with Some Unusual Symptoms. J. S. Fraser.
52 Cap for Dressing Mastoid Cases. J. S. Fraser.

Archives des Maladies du Cœur, Paris

December, I, No. 12, pp. 673-748

53 Study of the Electrocardiogram in Man in Normal and Pathologic Conditions. M. Mendelssohn.
54 *Mitral Stenosis and Congenital Malformations. (Rétrécissement mitral et malformations congénitales.) J. Heitz and A. Sézary.

54. Mitral Stenosis and Deformities.—Heitz and Sézary relate some cases which show the necessity for looking for congenital malformations when there is no other apparent cause to explain a cardiac affection. One patient, a man of 48, had hypertrophy of the left side throughout, with pure mitral stenosis. They were able to find only one case on record resembling this. In another case pure mitral stenosis was found in a young man with signs of infantilism and a few slight congenital malformations. In several cases on record, malformation of the fingers or sternum or asymmetry of the skull have been noted, as also dwarf growth, harelip or other deformity. It is probable that the mitral lesion was induced by the same cause responsible for the various deformities. In some cases this was known to be syphilis and in a few tuberculosis or alcoholism. There was probably some inflammation in the mitral valve entailing the stenosis.

Presse Médicale, Paris

January 2, XVII, No. 1, pp. 1-8.

55 Hemorrhagic Complications of Appendicitis. A. Broca and P. E. Weil.
56 Anesthesia of the Teeth. (Procédés d'anesthésie de la pulpe dentaire.) G. Mahé.

January 8, No. 2, pp. 9-16

57 Experimental and Spontaneous Atheroma. M. Lucien and J. Parisot.
58 Circumcision of New-Born Infants. (Circumcision chez le nouveau-né.) A. Schwab.
59 *Diagnosis of Tuberculosis by the Complement Fixation Method. A. Marmorek.

59. Diagnosis of Tuberculosis by Complement Fixation Test.—Marmorek remarks that the tuberculin diagnostic reactions indicate the presence of tubercle bacilli, but give no hint as to the relations between the bacilli and the organism, whether they are latent or active. It is impossible to tell from these reactions in doubtful cases whether the symptoms are due to the tuberculosis or to some other cause in an individual who is a carrier of latent tubercle bacilli. Marmorek thinks that much more important information can be derived from examination of the toxin generated by the tubercle bacilli. This toxin is not tuberculin, he says. Its presence can be determined by the hemolytic test in the serum or urine by adding serum from a horse immunized against tuberculosis. The horse serum contains the necessary complement when fresh, but if it stands a few days the complement disappears and more must be added, possibly in fresh guinea-pig serum. By comparison with a color scale, the fixation of the toxin-antitoxin-complement is readily recognized by the presence or absence of hemolysis when blood is added. Total hemolysis indicates the complete absence of the tuberculous toxin in the general circulation. He has examined the serum of 306 persons and the urine of 294 others, a total of 600, and the results encourage him to proclaim this method of diagnosis as a reliable means of determining the presence of an active tuberculous process in the organism. The findings conflicted with the clinical diagnosis in only 5 per cent. of the 600 cases, positive findings being obtained in a few instances in which nothing else suggested tuberculosis. In a few cases the findings in the serum conflicted with those of the urine in an inexplicable way; in one case of this kind there was cystitis.

Revue de Chirurgie, Paris

January, XXIX, No. 1, pp. 1-227

60 *Inflammatory Tuberculosis. A. Poncet and R. Leriche.
61 *Perinephritis Consecutive to Nephrectomy. F. Legueu.
62 *Treatment of Muscular Atrophy by the Method of Progressive Resistance. Rochard and P. De Champtassin.

60. Inflammatory Tuberculosis.—Poncet and Leriche here present their entire theory of the tuberculous origin of a number of processes in bones, joints or muscles hitherto ascribed to other origins. They answer the objections that have been raised, and show how keloid, false inflammatory tumors of the stomach, intestine and breast and inflammatory infiltrations and scleroses, localized or diffuse, may be the work of toxins generated or left by tubercle bacilli. By serodiagnosis it is often possible to reveal the latent bacillary infection. The inefficacy of the salicylates is another argument in favor of the assumption of the tuberculous origin of this form of rheumatism. They conclude their communication by saying that "to look around one is to become convinced of the existence of inflammatory tuberculosis."

61. Postoperative Perinephritis.—Legueu reports a case of phlegmonous perinephritis five years after nephrectomy. An exploratory operation revealed a large knot of silk as the cause of the suppuration. He declares that it is wrong to ligate the pedicle of the kidney with silk. In another case a lumbar fistula developed ten years after the nephrectomy, and fragments of the kidney pelvis left behind at the operation were evidently responsible for the fistula. In a second similar case recovery was not complete until the remaining scraps of kidney and the ureter had been entirely removed. It is extremely difficult in such cases to discover all the fragments of kidney tissue left behind, and even the ureter is not always easily found. The tuberculous cases are most liable to trouble from fistula, and he urges more extensive removal of the fat surrounding the kidney even when it appears perfectly healthy to the eye. This resection of the fat scarcely prolongs the operation, while it has a remarkable effect in obviating postoperative complications.

62. Treatment of Atrophy of the Muscles.—Rochard and De Champtassin proclaim the value of treatment of atrophy of a muscle by utilizing osmosis, that is, aiming to restore the osmotic conditions in the muscular fiber, such as are necessary for the dynamic action of the muscle in its normal task. To have the restoration perfect, the muscle should not only be called on for its normal physiologic work, but for the greatest amount of work of which it is capable The muscle should be urged to voluntary contractions, then to contractions against resistance, then to contractions against constant resistance during each effort, then with stronger contractions with increasing resistance. Swedish movements are based on the "trophic theory," not on the theory of osmosis, and thus the method differs essentially from the present method of progression of resistance They have devised two appliances for exercises with heavy weights, which allow careful graduation of the resistance, and estimation of the effort put forth. The results realized to date sustain their assertions, they say, in regard to the prompt cure by a brief course of this treatment and its value in prophylaxis.

Semaine Médicale, Paris

January 13, XXIX, No 2, pp 13-24

63 *Estimation of Pancreatic Secretion by Amount of Amylopsin in the Stools E Enriquez, L Ambard and M. E Binet

63. **Test of Pancreatic Functioning by Amount of Amylopsin in the Stools.**—Enriquez describes a method by which it is possible to measure the amount of amylase in the feces and thus to obtain insight into the functioning of the pancreas. Its three ferments lipase trypsin and amylopsin, if regained totally from the feces, would throw light on the functioning of the organ, but it is difficult to estimate the proportion of the first two in the stools, while dosage of the amylopsin is comparatively simple and easy Leo announced some time ago that amylopsin is more abundant in diarrheic stools, and the experiences related confirm this Research on 150 individuals resulted in the working out of the following technic to obtain the maximum of the pancreatic amylase in the stools. Trypsin does not destroy ferments in contact with it if they are mixed with albumin Consequently the first step is ingestion of a pint and a half of milk followed in an hour with a good purgative and an hour after the purgative, 250 c c of an alkaline mineral water. To prevent destruction of the amylopsin by microbes and trypsin, a piece of ice is placed in the vessel for the dejecta The solid stool is removed and the fluid diluted to 20 liters The unit adopted is the sugar gram hour, that is, the quantity of sugar that could be formed in one hour by the total amount of the ferment. For instance, if 1 c c produces 0.102 gm. in one hour, the 20,000 c c. of the total 20 liters would produce 2,040 gm. of sugar. In such case, the total feces represent 2,040 amylopsin units A 1 per cent solution of starch is acidified with hydrochloric acid to the optimum reaction and 1 c c. of the diluted feces is mixed with 50 c c. of the starch paste and kept in the incubator at 39 C for half an hour. The proportion of amylopsin is larger the more rapidly the purgative acts, the ferment evidently being lost during long passage through the intestine Most of the tests were on healthy persons, but in two cancer patients there was almost complete absence of amylopsin. He is convinced that when the technic is further perfected it will afford most useful insight into the functioning of the pancreas.

Beitrage zur klinischen Chirurgie, Tübingen

December, LXI, No 1, pp. 1-299

64 Comparative Research on Transplantation of Tumors and Normal Tissues (Vergleichende Untersuchungen uber die Transplantation von Geschwulsten und von normalen Geweben) G Schone

65 Gaseous Gangrene Case of Brain Abscess Caused Exclusively by Anaerobic Bacteria. (Zur Kenntniss der Gasgangran und uber einen Fall von Hirnabscess, ausschliesslich bedingt durch anaerobe Bakterien) M Heyde

66 *Treatment of Suppurative Processes with Antiferment Serum and Its Theoretical Bases (Behandlung eitriger Processe mit Antifermentserum) H. Kolaczek.

67 [illegible] Id

68 [illegible] Talocrural Joint. Meissner [illegible]

69 *[illegible] ment of [illegible] in der [illegible] der gutartigen Magen Erkrankunge[illegible]

70 *Mammary Carcinoma and Its Operative Permanent Cure Horing

71 *Diagnosis, Treatment and Prognosis of Abdominal Contusions Importance of Intraperitoneal Hemorrhage (Verletzungen der Leber, Milz, Niere, des Pankreas und des Darms) W Noetzel.

72 *Primary Carcinoma in the Main Biliary Passages (Das primare Carcinom in den H[illegible] [illegible]elius

73 Traumatic Rupture of the [illegible] der Oesophagusrupturen) G. [illegible]

74 *Total Avulsion of the Scalp (Falle von Skalpierung) Id

66. **Treatment of Suppurative Processes with Antiferment Serum.**—Kolaczek reviews the theoretical bases and practical experiences with the antiferment serum treatment described recently in these columns. He concludes that the antiferment serum not only supplies the ferment which protects against proteolysis, but at the same time it supplies vitally active leucocytes, opsonins, complements and amboceptors, either supplying them from without or attracting them to the spot, and thus summoning the most powerful defenses of the organism.

69 **Operative Treatment of Non-malignant Stomach Affections.**—Mayer reviews the experiences with 57 cases in which the operations were done several years ago and the patients have been re-examined recently He concludes from this material that the patient must be very cautious after a gastroenterostomy, and that it must be impressed on him that it does not complete the cure, but merely starts the digestive tract on the road to recovery The patient must expect to be very circumspect in his mode of life continuously thereafter

70 **Cancer of the Breast.**—Horing reports 200 cases, and in over half the left breast was involved He was able to obtain information in regard to each of the 200 patients to date, the first complete series of the kind, he thinks, on record. Excellent results were obtained when the tumor was of slow growth and not larger than a plum, the skin still movable. *In this group over 80 per cent. of the patients were permanently cured,* while less than 30 per cent were cured in the group in which the tumor had begun to grow, possibly after a stationary period, and the skin was adherent and several glands in the axilla were palpable This is the condition in which the patients generally apply for relief. He noted a special malignancy when there was a family history of cancer.

71 **Contusions of the Abdomen.**—Noetzel reports 13 cases in detail, remarking that the diagnosis of severe intraperitoneal injuries will always be a difficult matter.

72. **Primary Carcinoma in Biliary Tract.**—Borelius reports fourteen Swedish cases, including four from his own experience, and then reviews the diagnosis *In no case on record has there been a survival of more than three years.*

74. **Total Avulsion of the Scalp.**—Petren has had occasion to treat two women whose hair was caught in machinery and the entire scalp pulled off, and he has collected 24 similar cases from the literature One of his patients died from the injuries, but the other recovered and the head healed with a number of Thiersch flaps

Berliner klinische Wochenschrift

January 4, XLVI, No 1, pp 1-44

75 Treatment of Epileptic Psychoses E Siemerling.

76 Acute Fibrous Obliterating Bronchitis A. Fraenkel.

77 Treatment of Placenta Praevia (Klinische und private Geburtshilfe) W. Bokelmann

78 Perception of Light and Colors (Wahrnehmung des Lichtes und der Farben) F. W. Edridge Green

79 Appendicitic Pseudomyxoma of the Peritoneum. (Pseudomyxoma peritonei ex processu vermiformi) A Neumann

80 Treatment of Typhoid with Collargol Enemas. T Mironescu

81 Campaign against Scoliosis. (Kampf gegen die Skoliose) B Bosse

Correspondenz-Blatt für Schweizer Aerzte, Basle

January 1, XXXIX, No 1, pp 1-32

82 Management of Childbirth with Contracted Pelvis (Ueber beckenerweiternde Operationen und Behandlung der Geburten bei Beckenverengerungen uberhaupt) P Muller

83 Three Cases of Meat Poisoning (Botulismus) Blattmann

Deutsches Archiv fur klinische Medizin

XCV, Nos 1-2, pp 1-210 Last indexed Jan 30, p. 423

84 *Diabetes Insipidus W Ebstein

85 Early Detec[illegible] ulosis with the Roentgen Rays ([illegible] Lungentuberkulose mit Hilfe der [illegible] ieder

86 Research o[illegible] Patients with Special Regard to Respiratory Quotient (Stoffwechseluntersuchungen an Typhuskranken) F Rolly and P Hornig

87 Biologic Experiments on Precipitation of Egg Albumin and Serum with Iron (Biologische Versuche uber Fallungen von Albumin ovi und Seris mit Eisen.) F. Dittborn and W Schultz

88 Influence of Muscular Work and External Temperature on Degree of Alimentary Glycosuria. (Einfluss von Muskelarbeit und Aussentemperatur auf das Mass der alimentären Glykosurie.) J. Grober.
89 Metabolism in Epileptics. (Stoffwechseluntersuchungen an Epileptikern.) E. Rohde.

84. **Diabetes Insipidus.**—Ebstein has long been studying the relations between diabetes and affections of the nervous system and syphilis. He remarks that both forms of diabetes must be closely related, as one may be transformed into the other. Severe material changes in the kidneys may simulate diabetes insipidus. Neuffer asserts that it never develops in women over 50, and elderly people with symptoms of diabetes insipidus coming on gradually are probably affected with contracted kidney, even in the absence of albuminuria and tube casts. It is evident, Ebstein thinks, that diabetes insipidus develops on a nervous basis, either from material injury of the nervous system, especially of the medulla oblongata, or from functional disturbances of the nervous system, such as are observed in general neuroses. The share of syphilis in its production is probably from the injury to the nervous system by the syphilis poison. He relates cases in which the use of salt induced or aggravated polydipsia and polyuria, while restriction to a salt-free diet benefited in many cases. One patient was thus able to keep the affection permanently within bounds, and Ebstein warns that the salt-free diet should always be given a trial rather than an attempt made to restrict the intake of fluids, which is by no means a harmless measure. The amount of fluid allowed should not be reduced except with the utmost caution. He gives the details of 17 cases from the literature in which syphilis was evidently responsible for the diabetes insipidus, and in which a cure or notable improvement followed specific treatment. In some other cases in his own and others' experience the antisyphilitic treatment had no influence on the course of the diabetes. The youngest patient was 20 and the oldest 54 in the various cases. He also summarizes the autopsy reports of 6 cases of diabetes insipidus in consequence of syphilis. Changes in the medulla oblongata were noticeable in 50 per cent., and it seems possible that the localization of the syphilitic process in certain parts of the medulla may be the connecting link. In 5 of the 6 cases there were also syphilitic lesions in the liver.

Deutsche medizinische Wochenschrift, Berlin

January 7, XXXV, No. 1, pp 1-48

90 *Clinical Importance of the Electrocardiogram. H. E. Hering.
91 Diagnosis of Typhus. (Zur Kenntniss und Diagnose des Fleckfiebers.) C. Baumler.
92 Psychiatry and Social Medicine. A. Pick.
93 *Etiologic Therapy of Syphilis. L. Spitzer.
94 Treatment of Chorea. G. Koster.
95 Diagnosis of Scrap of Iron in Eye. (Fall von minimalem Eisensplitter in der Linse nebst Bemerkungen über die Diagnose intraocularer Eisensplitter.) A. Vossius.
96 Suction Treatment of Nasal Affections. (Saugbehandlung der Nase.) Walb.
97 Cancer Questions. (Diskussionsbemerkungen über einige Geschwulstfragen.) D. v. Hansemann.

90. **Clinical Importance of the Electrocardiogram.**—Hering comments on the important information to be derived from this method of investigation which allows deeper insight into the analysis of the heart action than any other method, and he advises that all large clinics should be equipped for the purpose. It is important to record the position of the patient, and it would be better to conform to some uniform technic for comparison of the tracings.

93. **Etiologic Therapy of Syphilis.**—Spitzer has treated twenty syphilitics with an aqueous extract of the specific sclerosis. The technic followed was that of the ordinary Pasteur treatment of hydrophobia. Eleven of the patients developed the usual general manifestations, but in seven, under observation for from eighteen months to four years, no trace of secondary phenomena could be detected. One of these patients contracted a new infection two and one-half years after the treatment.

Deutsche Zeitschrift für Chirurgie, Leipsic

December, XCVI, Nos 5-6, pp 321-617

98 Isolated Fractures of Transverse Processes of Lumbar Spine. P. Haglund.
99 Tumor of Carotid Gland. C. Licini.
100 Surgery of Biliary Tract. (Chirurgie der Leber und der Gallenwege.) A. Jenckel.
101 Origin of Concretions in Joints. (Entstehung der Gelenkmäuse.) Veit.
102 Treatment of Fistula between Intestine and Bladder by Exclusion of Former. (Zur Therapie der Darmblasenfistel mittels Darmausschaltung.) W. Sachs.
103 Operations on Biliary Tract. (Operationen an den Gallenwegen.) K. Mizokuchi.
104 Transplantation of Thyroid Tissue into Pocket in Bone Marrow. (Neue Methode der Transplantation des Schilddrüsengewebes.) C. Sermann.
105 Traumatic Hernia of Fat in Lumbar Region. (Lendenhernien. Adipocele im Rhombus Lesshaft.) E. Ruppanner.
106 Diagnosis and Treatment of Congenital Dislocation of the Hip. (Angeborene Hüftverrenkung.) Dreesmann.
107 The So-called Retrograde Incarceration of the Intestine. M. Takayasu.
108 Bacteriology of Acute and Chronic Appendicitis with Special Regard to the Peritoneal Effusion. E. Franke.
109 Experimental, Critical Study of Death in Ileus. (Ileustod.) W. Braun and H. Boruttau.
110 Deformity of Shoulder, Corresponding to Coxa vara, Observed in Cretins. (Humerus varus.) E. Bircher.

Medizinische Klinik, Berlin

January 3, V, No. 1, pp 1-40

111 *Forms of Obesity. (Fettsucht.) C. von Noorden.
112 Management of the Puerperium. (Erfahrungen mit moderner Wochenpflege.) E. Opitz.
113 Differential Diagnosis of Cerebellar Tumors. (Kleinhirntumor.) T. Ziehen.
114 Diagnostic Importance of Basophile Spots in Red Corpuscles. (Diagnostiche Bedeutung der punktierten Erythrozyten im Blute.) K. Brandenburg.
115 *Treatment of Sciatica with Injection of Salt Solution. (Behandlung der Ischialgie mit Langescher Kochsalzinjektion.) J. Flesch.
116 Action of Catalase and Oxidase on Normal and Cancerous Liver Tissue. (Vergleichende Untersuchungen über die Wirkung der Katalase und der Oxydase in der normalen und der karzinomatosen Leber.) F. Blumenthal and B. Brahn.
117 Alimentary Disturbances in Infants, and Their Treatment. (Ernährungsstörungen im Säuglingsalter und ihre Behandlung.) E. Feer.

111. **Forms of Obesity.**—von Noorden summarizes his remarks in the statement that there are two well-defined forms of obesity, that due to overfeeding in proportion to exercise and that due to the influence of the thyroid. In the first form there is normal power of oxidation, but the disproportion between the intake and outgo causes obesity, either from excessive eating or lack of exercise or combination of both. In the thyrogenous form the power of oxidation is reduced, although the relation between intake and exercise may correspond to normal. The thyroid influence may be primary or secondary, hypofunctioning of the thyroid being the result of distant action from other organs, the pancreas, the ovaries, hypophysis, suprarenals or thymus. This latter form has been very little studied to date. This classification has more than theoretic importance, as it is a guide to treatment. The first form requires the cardinal rule for dietetic antifat treatment: reduction of the intake of calories with ample supply of albumin. If dietetic measures fail, the thyroid functioning should be suspected and a systematic course of thyroid treatment instituted under constant supervision. He regards this thyroid treatment as much less taxing on the patient than ordinary antifat dietetic measures, especially "starvation courses." The patient can be allowed to eat freely, especially meat and albumin, with no dietetic restrictions, and this is often a great relief for patients who for years have lived in the strait-jacket of antifat diet. The thyroid treatment is directly contraindicated in the first form of obesity (*Mastfettsucht*), although both forms may be combined in some cases. In certain cases of this form of obesity dietetic measures prove useless or dangerous, and the only thing is to accustom the patient gradually to greater transformation of energy, as by muscular work or withdrawal of warmth. Restriction of the diet might be followed by collapse in these cases. In the thyrogenous cases these measures and dietetic restrictions are liable to produce no effect except debilitation of the patients.

115. **Treatment of Sciatica with Saline Injections.**—Flesch reports eight cases of sciatica in which he applied Lange's method of local injection of salt solution under pressure. Lange himself has reported 60 per cent. of cures, and Flesch also found that the affection was refractory in some of his cases, although the effects were ideal in others. According to his experience, the loss of the Achilles tendon reflex on the affected side is a sign that the Lange injections will prove useful. Without the loss of this reflex, none of the other signs, tender points or Lasègue sign is decisive. The presence of

the knee-jerk excludes tabetic sciatica. Excellent results can be confidently anticipated in suitable cases. (See abstract 90 in The Journal, Jan. 23, 1909, page 336.)

Münchener medizinische Wochenschrift

December 29, LV, No. 52, pp. 2699-2714

118 Inflammation of Bursa of Shoulder with Lime Deposit. (Die mit Kalkablagerung einhergehende Entzündung der Schulterschleimbeutel.) Bergemann and A. Stieda.
119 Tuberculosis as Children's Disease. (Tuberkulose als Kinderkrankheit.) F. Hamburger.
120 Increased Euphoria and Activity as Initial Symptom of Infections. Bleuler.
121 The Faradic Interval. Loewenthal.
122 Malignancy of Ovarian Cystoma. Lunckenbein.

January 5, LVI, No. 1, pp. 1-56

123 *Opening up New Sources for Production of Antibodies. (Erschliessung ergiebiger Quellen von Schutzstoffen.) L. Heim.
124 Hemolysis of Streptococci. Lüdke and Polano.
125 Benzin Poisoning. (Benzinvergiftung.) H. Wichern.
126 *Intravenous Arsenic-Tuberculin Treatment. F. Mendel.
127 *Surgical Treatment of Exophthalmic Goiter. (Chirurgische Behandlung des Morbus Basedowii.) Krecke.
128 "Prick Reaction" in Diagnosis of Tuberculosis in Children. (Stichreaktion bei der Diagnose kindlicher Tuberkulose.) F. Hamburger.
129 Macroscopic Asthma Spirals in Sputum. Riehl.
130 *Ferment Treatment of Tuberculous Abscesses. T. Goldenberg.
131 *Phonendoskiascope. R. Schmincke.

123. Opening Up New Sources for Antibodies.—Heim comments on the wasteful way in which the immune sera have been obtained hitherto, the assumption being practically universal that the immune substances were contained in the juices alone and the tissue residue being generally discarded as useless. His experiments have shown that the tissues abound in the specific antibodies in animals immunized against the pneumococcus. The muscle substance is particularly rich in these protecting bodies. He grinds the muscle tissue and organs in a mortar, then mixes with water, 1/10, and with a little broth or peptone water. After five days of fermentation the filtrate is condensed in a vacuum and it is found rich in immune bodies, being capable of protecting animals against otherwise fatal inoculations.

126. *Combined Intravenous Tuberculin-Arsenic Treatment of* Tuberculosis.—Mendel expatiates on the necessity for supplementing tuberculin treatment with some drug which will promote the vital energy of the cells by favoring nutrition and thus increasing the protecting and resisting power of the cells. The combination has another advantage in that it utilizes the influence of the tuberculin in inducing an inflammatory reaction in the vicinity of the tuberculous focus. This local inflammatory reaction attracts the injected drug to the spot, so that the arsenic—if this drug be selected, which he strongly advises—accumulates in and around the tuberculous focus, stimulating the tissues at this point to extreme defensive and resisting action, and thus raising an effectual wall around the tuberculous focus, preventing its further spread. He has long been an advocate of the intravenous route for medication, and declares that it is particularly useful for injection of tuberculin, as many experiences have confirmed the surprising way in which minimal doses of tuberculin injected into a vein stimulate the production of the protecting substances in the organism infected with tuberculosis. The tuberculin by its exciting influence on the local focus and the resulting inflammatory reaction in the vicinity, acts like the express wagon which carries the package to the point where it is needed and leaves it there, while the arsenic stimulates the local curative action and at the same time has a general tonic effect. The combined tuberculin-arsenic treatment thus fulfils all the conditions which Ehrlich demands for an ideal chemotherapy: the supply of the "distributive substance" (tuberculin), and of a "pharmacophor group" with a specific action (arsenic plus tuberculin). Mendel has been applying this combined intravenous treatment for some time and has been much pleased with the results, not hesitating to declare that it offers the best chances for favorable influencing of the tuberculous process and that it should be introduced as a routine method of treatment in somewhat advanced cases in the sanatoria and also in dispensary treatment of cases in the first or second stage.

127. Surgical Treatment of Exophthalmic Goiter.—Krecke reviews his experience at Munich with 160 operations for goiter, including 17 of the exophthalmic form. He remarks that it is amazing to see how the nervous symptoms of the latter form subside after the operation. Within a week the patients are tranquil and sleep better, there is no more tremor and the pulse rate is slower. The mortality in 188 operations for exophthalmic goiter collected from five different clinics has been 9 per cent. His own experience indicates that it is wiser to operate at more than one sitting in the more serious cases or, better yet, to ligate first the afferent arteries. All his patients are delighted with the results of the operation, but the exophthalmos has not entirely subsided in any case; the operation does not seem to influence this. Eleven patients operated on more than two years ago have been in excellent health since. He had one fatality in his series, and he urges earlier resort to surgery and careful examination for a persisting thymus. In case the thymus is found enlarged he advises against operating. His experience has been favorable to general anesthesia. He advises operative intervention when the condition grows worse under internal measures, without further delay.

130. Ferment Treatment of Tuberculous Abscess.—Goldenberg does not use the ready-made ferment, but injects a solution of sodium nuclein to induce leucocytosis in the tuberculous abscess. This is supplemented later by Roentgen-ray treatment. His first case was a tuberculous abscess in the soft parts of the thigh, which healed completely in three sittings after it had long resisted ordinary treatment.

131. Phonendoskiascope.—Schmincke's combined fluorescent screen and phonendoscope allows the movements of the heart to be inspected at the same time that the heart sounds are heard. The glass is etched in centimeters to measure the extent of the excursions of the heart. The tube for auscultation passes through the center of the glass. By thus seeing and hearing simultaneously the movements of the heart, a number of important points can be learned.

Zeitschrift für Geburtshülfe und Gynäkologie, Stuttgart

LXIII, No. 2, pp. 217-405. Last indexed Dec. 19, p. 2198

132 Participation of Blood-Producing System in Metastasis of Uterine Carcinoma. (Beteiligung des hematopoetischen Systemes an der Metastasierung beim Uteruskarzinom.) H. Offergeld.
133 Management of Childbirth with Contracted Pelvis, and its Transformations. W. Hannes.
134 *Pathogenesis of Eclampsia. F. Ahlfeld.
135 Determination of Opsonins in Puerperal Infection. T. Heynemann and C. Barth.

134. Renal Basis of Eclampsia.—Ahlfeld's attention has been called to three special features in eclampsia: its preponderance in primiparæ, the rarity of recurrence, and the far more unfavorable course, both for mother and child, in multiparæ. He has been making a special study of recurring eclampsia as liable to throw light on the etiology, and was able to find in the literature records of 108 cases in which the woman had eclampsia a second time, and has observed three in his own practice. The facts observed show an unmistakable connection between the eclampsia and some kidney affection existing before the pregnancy. Only when eclampsia in the first pregnancy recurs in the second, without abortion in the interim, is it possible that this recurrence may be independent of a chronic kidney affection. As it seems to be established that the eclampsia in multiparæ is connected with insufficiency of the kidneys, this suggests that some functional disturbance in the kidney may also be responsible for it in primiparæ. The eclampsia poison is probably the products of decaying matter which are liable to get into the blood in any pregnancy, but which normally do not accumulate in the maternal body, but are harmlessly eliminated through the kidneys. This poison is not primarily and exclusively responsible for the eclampsia, but rather the functional disturbance in the kidney, partly of a physiologic and mechanic nature, partly pathologic. He summarizes his impressions in the assertion that there are three forms, of puerperal eclampsia: the pure typical form which occurs only in primiparæ; the eclamptic-uremic form which occurs in multiparæ or whenever there is chronic insufficiency of the kidneys; and pseudoeclampsia, which really has nothing to do with true puerperal eclampsia, but may occur at childbirth, independent of any kidney affection, from the action of some septic poison or chemical or from a brain affection or as a simple reflex phenomenon. Epileptic or hystero-epileptic convulsions may also simulate eclampsia.

Zentralblatt für Chirurgie, Leipsic

January 2, XXXVI, No. 1, pp. 1-40

136 Successful Treatment of Angioma with Carbon Dioxid Snow. (Behandlung der Angiome mit gefrorener Kohlensäure.) F. Sauerbruch.
137 Drainage of Hepatic Duct. (Zur Hepaticusdrainage.) H. Kehr.
138 Technic for Removable Sutures, especially in Herniotomies. (Zur Technik entfernbarer versenkter Nähte unter besonderer Berucksichtigung der Bassininaht.) Kirstein.

January 9, No. 2, pp. 41-72

139 *Extravesical Suprapubic Prostatectomy. W. J. van Stockum.

139. Extravesical Suprapubic Prostatectomy.—In the case described, the patient was 80 years old, and 12 c.c. of ethyl chlorid were used to induce anesthesia. A soft catheter was introduced into the bladder and a vertical incision was made on the median line from the root of the penis upward. The recti were drawn aside and the upper part of the urethra and prostate were exposed, working down to them with the finger, drawing up the fat tissue and the reflection of the peritoneum on the anterior aspect of the bladder, but no more than was strictly necessary to expose the prostate. The connective tissue on each side of the bladder was not disturbed. A small vertical incision was then made in the capsule over the most prominent portion of the prostate, a little to one side of the median line. Through this small opening in the capsule he was able to scrape out with one or two fingers the entire prostate, the catheter helping to locate it and an assistant's finger in the rectum pushing the gland into constant prominence. The enucleation proceeded as readily as with the Freyer technic and the bleeding was moderate. A large gauze sponge was packed into the wound to prevent hemorrhage later, which is one of the greatest dangers in prostatectomy. The wound was sutured except where the end of the sponge protruded below. Considerable blood escaped into the dressings and through the urethra for a few hours, but then ceased. By the twelfth day healing was complete and the patient was urinating spontaneously. van Stockum regards this technic as progress. In this case he made a buttonhole in the vertex of the bladder to drain the bladder, but thinks that a retention catheter would probably answer the purpose just as well. The neck of the bladder is not stretched as much as with the Freyer techni and the blood does not get into the bladder, consequently there is less danger of the catheter becoming obstructed with blood clots, which often occurs with the Freyer technic.

Zentralblatt für Gynäkologie, Leipsic

January 2, XXXIII, No. 1, pp. 1-40

140 *Sacral Anesthesia. (Ueber sakrale Anästhesie.) W. Stoeckel.
141 *Thrombosis and Allowing Patients to get up Early after Childbirth. (Thrombose und Fruhaufstehen im Wochenbett.) F. Fromme.
142 *Frequency of Thrombosis after Gynecologic Operations and Childbirth. (Häufigkeit der Thrombose nach gynakologischen Operationen und im Wochenbett.) M. Hofmeier.
143 Gallstones in Bladder. (Gallensteine in der Harnblase.) F. Michel.

January 9, No. 2, pp. 41-72

144 Best Fixation Method for Treatment of Immovable Retroversion with Flexion. O. Küstner.
145 Case of Primary Peritoneal Pregnancy. (Fall von primärer Peritonealschwangerschaft.) O. Groné.

140. Sacral Anesthesia.—Stoeckel has revived Cathelin's method of epidural injections, that is, injection of the anesthetic into the sacral canal below and outside of the dura, thus avoiding all direct contact with the spinal cord. He has found that this is a most excellent means for anesthesia in obstetrics, as it blocks the nerve tracts transmitting the labor pains without noticeable general action. It is thus an obstetric local anesthesia, and he has applied it in 141 childbirths. His patients included 89 primiparæ, and all deliveries were normal, the measure not being tried in any case suggesting possible complications. In 2 cases a second injection was given. In 96 cases the injection was made in the first and the others in the second stage of labor. In 18 cases no effect was apparent; in 12 it was dubious, but in 111 cases a favorable influence was unmistakable. In many cases the musculature of the perineum and of the floor of the pelvis seemed to be much relaxed, which rendered protection of the perineum easier. In 72 cases the pains in the sacral region were entirely or nearly abolished and in 39 cases both the sacral and abdominal pains. In 9 cases there was no pain as the head passed the vulva, and in 16 only very slight pain. In 3 cases the child was delivered with forceps, and in 2 a tear was sutured without the woman feeling it. The injection evidently has a tendency to check the contraction of the uterus when made as labor first begins. In 23 cases the contractions became weaker and less frequent; one woman was given an injection at the first slight pains and labor was suspended. It did not set in again in earnest until four days later. This suggests the possibility that impending abortion or premature delivery might be arrested by the sacral technic. The injections did not seem to have any effect on the labor contractions when once well started. No injurious influence on the child was observed in any instance, and strange to say, no retention of urine during the puerperium. He injected from 3 to 83 c.c., the dose of 33 c.c. being found most effectual. The method also proved successful in dysmenorrhea when the pain was in the back, and he suggests that this sacral injection might give relief in numerous cases of sacral neuralgia accompanying a gynecologic affection. He discusses the mechanism of the injection and gives illustrations of the exact technic. The effects demonstrate that the pain of labor and of menstruation does not originate in the uterus itself.

141. Allowing Women to Get Up Early After Childbirth.—Fromme has not found any lesser frequency of thrombosis when the women are allowed to get up earlier than the customary two or three weeks. He describes a case in which the patient was allowed to sit up in a chair beside the bed for an hour the second day after delivery. The next day there was rise of temperature and the day after streptococci could be cultivated from the lochia. The postmortem findings the tenth day showed thrombosis and embolism but no pyemia. The case illustrates anew the insignificant clinical signs that may be made by even very extensive thrombosis. He thinks it probable that the getting up early hastened the development of the thrombosis, and he warns urgently against it.

142. Frequency of Postoperative Thrombosis.—Hofmeier reviews his experience with 389 operations for myoma, with thrombosis in 6 cases, for which the operation was responsible in only 3 instances. In 10,000 obstetric cases there was thrombosis in 12 but no embolism or fatality. His statistics speak against the assumption that reduction in the proportion of cases of thrombosis is the result of any recent innovation, but that it is rather the natural progress of general asepsis.

Hygiea, Stockholm

October, LXX, No 10, pp. 899-1058

146 *Diagnosis of Renal Tuberculosis (Om diagnosen vid njurtuberkulos.) G. Ekehorn.
147 *Continued Experiences with Mercurial Treatment in Form of a Snuff. (Forstatta rön med kvicksilfversnusningskuren.) C. Cronquist.
148 Methods for Determining Outlines of Stomach. (Om metoderna för bestämmande af magsäckens gränser.) T. Fischer

November, No. 11, pp. 1059-1234

149 Case of Diabetes Insipidus Successfully Treated with Subcutaneous Injections of Strychnin. E. Rohde.
150 Auscultation Methods of Determining the Blood Presure and their Practical Value. (Den auskultatoriska blodtrycksbestämningsmetoden.) K. A. E. Fries.

146. Diagnosis of Renal Tuberculosis.—Ekehorn states that he has been able to diagnose tuberculous processes in the kidney by a simple bacteriologic technic. The course of the cases confirmed his diagnosis in every instance. This is particularly noticeable in the cases with negative findings, as none of these patients has shown signs of tuberculosis since. These experiences extend over a number of years, and he commends his technic for general adoption. The urine is drawn with a catheter (by the physician) after disinfection of the region, and the first portion of the urine is thrown away. The remainder is centrifugalized at once and as soon as the sediment is dry, Ziehl's solution of carbol fuchsin is poured on the object glass which is then heated until it steams but not boils. After a few minutes the stain is poured away and the object glass is placed, without rinsing, in a glass containing two parts nitric acid to one part water. The nitric acid solution can be used over and over again. The specimen is kept in the nitric acid for an hour. It is then rinsed and stained at once with malachite green, 1 part to 20 parts alcohol. The contrast stain is left in contact for one minute or longer and is then entirely rinsed off. The tubercle bacilli are the only ones that stain red, and they show up well on the green background. The vessels used are kept filled with caustic soda in the intervals. One interesting case is described at length in which a bilateral tuberculous epididymitis, with numerous tubercle bacilli in the urine, was accompanied by pains in the left kidney region but tubercle bacilli could not be detected in the urine from the kidneys. The patient recovered completely after removal of the testicles, and there has been no sign of tuberculosis of the urinary apparatus during the year or so since. With care it is possible to obtain the urine without contamination with smegma bacilli from the vicinity.

147. **Experiences with Mercury Given in the Form of Snuff.**—Cronquist has now an experience of 19 cases of syphilis treated with mercury in the form of hydrargyrum cum creta or a finer powder containing 40 per cent. metallic mercury. He orders 4 gm. of the powder inhaled during the day in the form of snuff at four different times, never more than five times. When his instructions are properly carried out, this method of treatment proves powerful and effectual, not only as an adjuvant to other measures, but as the main reliance. He gives the details of his 19 cases to sustain his assertions. He first described this treatment in 1907; his later experiences have confirmed his first favorable impression.

Norsk Magazin for Lægevidenskaben, Christiania

December, LXIX, No. 12, pp. 1121-1200

151 *Treatment of Pulmonary Tuberculosis with Artificial Pneumothorax. K. Thue.
152 *Glycerin Treatment of Pernicious Anemia on Basis of Recent Research. (En kasuistik meddellelse til belysning af de nyere undersøgelser over perniciøs anæmi.) H. J. Vetlesen.

151. **Artificial Pneumothorax in Pulmonary Tuberculosis.**—Thue observed some years ago the case of a young man with tuberculosis in the left lung, under treatment for some months when hydropneumothorax developed on that side and the patient began to improve. For twelve years longer he was in comparative health, doing hard manual labor, when he succumbed to sudden hemorrhage. The left lung was found still compressed with a pneumothorax and the tuberculous process had become entirely obliterated. In this case the natural pneumothorax accomplished the desired result and for the same purpose Thue has made an artificial pneumothorax in eleven cases and Saugman has done it in thirteen. The results as Thue describes them are encouraging, although the treatment was applied in such advanced cases that a cure could not be expected. The details of his eleven cases are given in full. He thinks that the method should be given a trial even in the afebrile cases when the tuberculous process continues a progressive course rebellious to other measures.

152. **Treatment of Pernicious Anemia on New Basis.**—Vetlesen refers to Tallquist's research on anemia from the bothriocephalus in which he found that a hemolytic substance present in the parasite is responsible for the anemia. This hemolytic substance proved to be oleic acid, both its cholesterin and its sodium salt having hemolytic properties. In normal conditions there is not much cholesterin in the blood, but when it reaches a certain concentration the hemolytic action follows. Tallquist suggested administration of calcium to form an insoluble compound with the oleic acid, or of glycerin which unites with the oleic acid to form ordinary olein, the harmless oleate of glyceryl. Vetlesen has been applying the results of these abstract researches in the clinic, and reports a case of progressive pernicious anemia with hemoglobin, 40 per cent., and only 1,110,000 red corpuscles, in which after failure of other measures he gave the patient a tablespoonful of glycerin, with a little lemonade, three times a day. In the course of five months of this glycerin treatment alone the hemoglobin increased to 100 per cent. and the number of reds to 4,400,000, while the patient gained about 25 pounds in weight. Vetlesen continues that the favorable results sometimes observed in pernicious anemia from treatment with bone marrow extract may have been in reality due to the glycerin vehicle.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

Year-Book of the Anglo-American Medical Association of Berlin. Annual Report and List of Members for the year closing with the Summer Semester of the University of Berlin, 1908. Including a list of Courses given in Berlin, and other Information. Paper. Pp. 72. Published by the Association. (President, Dr. James H. Honan, Lützowstrasse 78, Berlin, W., Germany.)

Diseases of the Digestive Canal. By Paul Cohnheim, Specialist in Diseases of the Stomach and Intestines in Berlin. From the Second German Edition. Edited and Translated by Dudley Fulton, M.D., Lecturer on Medicine, University of Southern California, Los Angeles. Cloth. Pp. 373 with illustrations. Price, $4. Philadelphia: J. B. Lippincott Co.

Diseases of the Nose, Throat and Ear. By Francis R. Packard, M.D., Professor of Diseases of the Nose and Throat in the Philadelphia Polyclinic Hospital and College for Graduates in Medicine. Cloth. Pp. 369, with illustrations. Price, $3.50. Philadelphia: J. B. Lippincott Co.

American Practice of Surgery. Edited by Joseph D. Bryant, M.D., LL.D., and Albert H. Buck, M.D., of New York City. Complete in Eight Volumes. Vol. V. Cloth. Pp. 965, with illustrations. Price, $7 per volume. New York: William Wood & Co., 1908.

New York State Library, Year-Book of Legislation. Legislation Bulletins 35-36. Vol. 9, 1907. Edited by Frederick D. Bramhall, Legislative Reference Librarian. Cloth. Pp. 599. Price, $1. Albany: University of the State of New York, 1908.

Hygiea Festband, Utgifvet af Svenska Läkaresällskapet till Minne af dess Hundraåriga Verksamhet den 25 Oktober 1908. Redigeradt af Prof. Dr. Carl Sundberg. In 2 parts. Paper. Stockholm: Isaac Marcus' Boktr.-Aktiebolag.

Transactions of the Fourteenth Annual Meeting of the American Laryngological, Rhinological and Otological Society. 1908. Cloth. Pp. 548, with illustrations. St. Louis: Published by the Society, 1908.

Proceedings of the American Society for Psychical Research. Vol. II. December, 1908. Part 3. Paper. Pp. 674. Price, $2.50. New York: Published by the Publication Committee of the Society.

Thirty-third Annual Report of the Ladies' Union, Charitable Society, Conducting the Lawrence General Hospital and Children's Home, 1908. Lawrence, Mass., 1908. Paper. Pp. 72

The American Tropics. By William Thomas Corlett. Half cloth, boards, top edge gilt. Pp. 221, with illustrations. Price, $1.50. Cleveland: The Burrows Brothers Co., 1908.

New Patents

Recent patents of interest to physicians:

908388. Air-purifier. W. G. R. Braemer, Buffalo, N. Y.
907749. Massage machine. W. D. Davenport, Kaufman, Texas.
907784-5. Bandage. W. R. Green, Kansas City, Mo.
907839. Douche-chair. S. A. Mendenhall, Hamburg, Iowa.
907875. Sanitary receptacle. R. W. Pritchard, Portland, Ore.
908150. Device for production of medicinal baths. R. Schubardt, Berlin, Germany.
908171. Oxidizing camphol for making camphor. A. Verley, Paris, and E. Urbain Feige, Gentilly, France.
39732-3. Design, neck and chest protector. J. S. Mead, Milwaukee, Wis.
908959. Bandage support. C. M. Cooke, New York.
908845. Lift strap for recumbent patients. D. Curtin, Villanova, Pa.
909077. Truss. J. S. E. Freel, Newark, N. J.
908855. Massage apparatus. H. Ginnel, Garden City, N. Y.
908998. Truss. C. A. Jensen, Bailey, Nebr.
908573 and 909093. Nozzle for syringes, etc. H. A. Kaysan, Cassel, Germany.
909002. Respirator. N. Lambert, Rolla, N. D.
908881. Artificial hand. A. F. Nelson, Renton, Wash.
909020. Hospital cup. H. J. Potter, Boston.
909129. Attachment for crutches. J. W. Ricks, Gloversville, N. Y.
908533. Abdominal supporter and suspensory. P. Zuckriegel, Cleveland, Ohio.
909527. Composition for antiseptic and other purposes. H. S. Blackmore, Mount Vernon, N. Y.
909309. Apparatus for generating ozone. W. Kolle, Stuttgart, Germany.
909627. Therapeutic lamp. E. W. Locke, Chicago.
909435. Truss. E. Mayer and E. Strahlmann, San Diego, Cal.
909635. Sanitary comb. H. T. Moler, Pitcairn, Pa.
909224. Adjustable crutch. G. S. Rhodes, Fremont, Ohio.
909827. Crutch-tip. E. H. Seibert, St. Louis.
909823. Vibratory massage apparatus E. N. Sipperley, South Norwalk, Conn.
909349. Catamenial bandage. J. A. Treber and B. Simon, Deadwood, S. D.
909859. Artificial leg. J. T. Apgar, New York.
910270. Sheet-metal disinfectant cabinet or holder. E. W. Carnes, Chicago.
910362. Remedial head-band. C. C. Dieudonne, Washington, D. C.
910004. Truss. W. Lennox, Philadelphia.
910303. Truss. R. R. McGregor, Covington, Tenn.
910144. Atomizer. F. E. Nelson, Los Angeles, Cal.
909948. Suspensory. E. A. Schmertz, Atlantic City.
910154. Poison indicator. J. B. Smith, Knoxville, Tenn.
910440. Distilling glycerin. F. J. Wood, New York.
909979. Respiratory apparatus. E. E. Zerkle, Chicago.
39777. Design, poison bottle. A. J. Iwan, Marshfield, Wis.

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Original Articles

CONCLUSIONS FROM 1,087 CONJUNCTIVAL TUBERCULIN TESTS BY A UNIFORM METHOD *

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The reports which form the basis of this contribution were obtained from forty physicians engaged in tuberculosis work, most of whom are clinicians, and to whom my acknowledgments are herewith made with thanks. The same preparation of tuberculin was furnished to all, together with an eye-dropper graduated to 0.25 c.c. The material was obtained from 500 c.c. of old tuberculin (human) precipitated with alcohol and redissolved in normal salt solution when sent out from the laboratory. It had been filtered through a thick Berkefeld bougie and contained no dead tubercle bacilli or fragments recognizable by staining. Some preliminary tests which I made indicated that the percentage used by Calmette (1 per cent.) was dangerously strong, at least for this preparation. Hence the solutions were made 0.3 per cent. and 0.5 per cent. in sterilized sealed tubes and provisional directions given to begin with the weaker and repeat it in the other eye with the stronger if no reaction occurred to the first instillation. It was considered a contraindication to the employment of the test if any eye disease existed. To the use of a small measured drop, weak, sterile solutions and the observance of contraindications may be attributed in part the rarity of severe or prolonged reactions and sequelæ. But one instance of keratitis has been reported, and that in a scrofulous subject who recovered completely without opacity. The reports herein contained do not comprise all[1] the tests made with the same preparation of tuberculin, but a request made to those clinicians who were unable to report their tests in detail for a report of any injurious effects noted has not produced any further cases. Six hundred additional tests were cited without resulting injury, 100 being on infants.

Practically all of the tests were made within three months of the date when the solutions were prepared, and no deterioration in strength was noted except in some tubes kept six months. It is probable, however, that some reactions failed to appear from this cause.

SUMMARY OF RESULTS

In the following tables are presented the results as collated from record charts sent to all the recipients of the tuberculin. They include 887 individuals, in 190 of whom a second instillation was made in the opposite eye and 10 in the same eye, a total of 1,087 instillations.[2]

There were 310 cases of tuberculosis in some form, 265 suspected tuberculous, 127 subjects of other diseases and 185 supposedly healthy subjects. Doubtful reactions are excluded from the tables.

TABLE 1.—SUMMARY

Pulmonary Tuberculosis	No. Cases.	+ Reactions.	Per cent.
Stage I.—Incipient.			
Tb. bc. demonstrated	33*	20	60 6
Tb. bc. not demonstrated	49	35	71.4
Total	82	55	67
Stage II.—Moderately advanced.			
Tb. bc. demonstrated	96†	76	79.2
Tb. bc. not demonstrated	22‡	13	59.1
Total	118	89	75
Stage III—Far advanced	36	18	50
Clin. healed	24	17	70
Other forms of tuberculosis	50**	39	78
Grand total	310	218	70
Pul. Tub. suspected	219	73	33 3
Other forms suspected	46	22	47.8
Total	265	95	35.9
Other diseases	127	19	14.1
Healthy subjects unsuspected	185	34	18.3

* Nine were under tuberculin treatment and failed to react.
† Nineteen were under tuberculin treatment of whom 10 reacted positively.
‡ One was under tuberculin treatment and failed to react.
** Eight were under tuberculin treatment of whom one reacted.

In reviewing the percentages in Table 1 it is apparent that a considerably greater number of patients with pulmonary disease reacted in the moderately advanced class than in the incipient, while in the far advanced the number of reactions was less. It is probable that the patients forming the moderately advanced class, being taken from sanatoria in the greater part, were in better condition than the hospital patients tested by Wolff-Eisner, who found a decreased percentage of reactions with the advance of the disease. The influence of tuberculin treatment in lowering the sensitiveness of the conjunctiva brought down the percentage of reactions appreciably. It is also noteworthy that fully 70 per cent. of persons who had been healed in the clinical sense from two to thirty years reacted positively. The chief interest relates to the clinically incipient (71.4 per cent. positive) and suspected cases (33.3 per cent. positive), in which the test would be expected to assist in diagnosis. The results fall considerably short of the requirements for an ideal diagnostic method in suspected tuberculosis, though relatively good in confirmation of the clinically tuberculous cases. The percentage of supposedly healthy subjects and patients with nontuberculous diseases reacting positively closely accords with that found by Wolff-Eisner and Petit in a larger number of cases.

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* m the Saranac Laboratory. Read at the on Tuberculosis, Clinical Section, Wash-

[1] They include the cases published by Drs. C. Floyd and J. B. Hawes 2d (Jour. Med. Research, 1908, xvii, No. 4) and also most of those reported by the writer of this paper in THE JOURNAL A. M. A., Dec. 14, 1907, xlix, 1969.

[2] A few received a third instillation with another tuberculin.

AGE DIVISIONS

Table 2 shows the age divisions and positive reactions. From this it will be seen that 15.2 per cent. were children under 15 years of age. The number of cases in the youngest and oldest classes is too small to give any importance to the percentage of reactions. The high percentage of positive results in the age division 10-15, is noteworthy, especially in the non-tuberculous diseases, when compared with the older classes. Probably no significance can be properly given to such small numbers of cases.

A history of tuberculosis in the family or of exposure to the disease was not fully reported, but in 62 suspected cases with family tuberculosis 50 per cent. reacted; of 35 healthy persons with like history 25.7 per cent. reacted.

SEVERITY OF REACTIONS

The grade of reaction severity was not recorded as fully as desired, although the schema in Table 3 was originally suggested for this purpose to the recipients of the tuberculin. The following meaning is to be understood from the signs:

+ Distinct palpebral redness with secretion.
++ Ocular and palpebral redness with secretion.
+++ Deep injection of entire conjunctiva with edema of lids, photophobia and secretion.

TABLE 2.—Age Divisions

	Ages 0-10. No.	+ Reactions. No.	Per Cent.	Ages 10-15. No.	+ Reactions. No.	Per Cent.	Ages 15-40 No.	+ Reactions. No.	Per Cent.	Ages 40 + No.	+ Reactions. No.	Per Cent.	+ Total Reactions. No.	Per Cent.
Tuberculosis, all forms	20	8	40	26	24	92.3	238	162	68	39	24	61.6	218	70
Suspected	5	1	20	45	21	46.6	193	69	35 7	22	4	18 1	95	35.9
Other Diseases	16	5	31.2	16	7	43.7	73	3	4.1	22	4	18.1	19	14.1
Healthy	3	0	0	4	0	0	157	27	17	21	7	33.3	34	18 3
Total	44	..	....	91	..	....	661	..	....	104	..	....	..	....

TABLE 3.—Severity of Reactions

	+	++	+++	Prolonged Conjunctivitis.	Sequelæ.
Pulm. tuber. I—					
Tb. Bc. demonst'd.	9	11	3	....	....
Clinical	16	13	3	....	....
Pulm. tuberc. II.—					
Tb. Bc. demonst'd.	50	22	4	5— 5 days	....
Clinical	11	1	1	....	....
Pulm. tuberc. III....	12	4	2	1— 8 days	....
Clinically healed.	14	5	1	1—10 days	....
Other forms tuberc..	11	22	6	1—12 days 2— 7 days	1 keratitis (scrofula aged. 22)
Pulm. tuberc. suspected	48	14	1	....	....
Other forms tuberc. suspected	22	?	?	....	....
Other diseases	13	6	?	....	....
Healthy (unsuspected)	19	8	3	....	....
Total	225	106	24	10	1

Comment may be made on the fact that severe reactions were not confined to the well-marked tuberculous subjects, but occasionally were produced in apparently healthy persons. The strongest reactions, however, were more frequent in the first stages of tuberculosis. The small number (24) of very severe and (10) prolonged reactions has already been noted. Three severe reactions were accompanied by coryza in the corresponding nostril and constitutional symptoms — slight fever, malaise and muscular pains; one of these had a nosebleed.

REPETITION OF THE TEST

Repetition of the test in the same eye was recorded in 10 cases and in the opposite eye in 190 persons who had not reacted to the first test. All the first were tuberculous or suspected, so that little value can be placed on the reactions (which occurred in all) as indicative of acquired sensitiveness in hitherto uninfected subjects. The reactions to repetition in the same eye were, nevertheless, severe, as shown in the following table, and illustrate the heightened sensitiveness produced by the first instillation. The interval between the first and second instillations in the same eye was from two weeks to two months, which was sufficient for the creation of antisubstances.

TABLE 4.—Second Instillation

	No.	+	++	+++	Per Cent.
Same Eye	10	1	2	7	100
Opposite Eye	190	29	7	0	18

Only 18 per cent. of the opposite eyes responded *positively, nearly all of which were in suspected or* tuberculous subjects and instilled within a week after the first test. The value of this method in increasing the percentage of reactions would seem to be relatively small.

INFLUENCE OF FEVER

The presence of fever was reported in 67 tuberculous and 25 suspected cases. Where the degree was noted only those of 99.5 F. and over are included in the following table. Mouth temperatures are to be understood.

It is apparent that the presence of fever does not diminish the chance of reaction, for even in the cases in Stage III, in which the highest fever prevailed, the percentage is the same as in Table 1 for the whole number. The same may be noted in the suspected class in which the subcutaneous test could not be employed in the presence of fever. On the other hand, the tuberculous of Stages I and II show a higher percentage.

TABLE 5.—Influence of Fever

Pulmonary Tuberculosis.—Stage I.	Cases.	Reaction +
Tb. bc. demonstrated	10	8
Clinically	10	6
Stage II.		
Tb bc. demonstrated	22	21
Clinically	1	0
Stage III.	17	9
Other forms	7	7
Suspected	25	8

COMBINED CONJUNCTIVAL, CUTANEOUS AND SUBCUTANEOUS TESTS

The next table shows the results in the cases subjected to control tests. The cutaneous tests were usually made subsequent to the conjunctival and all the subcutaneous tests were thus made.

In addition four tuberculous patients were tested by the percutaneous method of Moro, with positive results in all.

Without mention of details as to maximum doses a full discussion of these tests is unprofitable. In many cases the reports were incomplete, but it is sufficient to note a fair correspondence between the reactions among the tuberculous and the larger proportion of reactions to the cutaneous and subcutaneous tests among the suspected and healthy. So far as they go these cases confirm previous observations of the relative reacting power of the tests, but no data of value were brought forward as to the prognostic value of the conjunctival reaction. Among the tuberculous patients whom I tested no such regular correspondence between the degree of the reactions and the clinical prognosis was observed as found by Wolff-Eisner and Stadelmann except in the far advanced class. Among 90 patients of all stages recorded as favorable, only 67 reacted: of 11 doubtful, 9 reacted, and of 35 unfavorable, 29 gave a strongly positive reaction in most cases.

TABLE 6.—CONTROL TESTS

	Conjunctival.* Total.	Conjunctival.* Pos.	Cutaneous. Total.	Cutaneous. Pos.	Subcutaneous. Total.	Subcutaneous. Pos.
	23	11	23	13	..	..
Tuberculous	31	13	..	..	31	18
	20	4	20	10	..	..
Suspected	35	7	..	..	35	18
	2	1	2	0	..	..
Other Diseases	9	1	..	..	9	1
	7	1	7	4	..	..
Healthy	14	0	..	..	14	3
Total	141	38	52	27	89	40

* The conjunctival reaction appeared for the first time in 4 cases during the subcutaneous reaction and recurred in 2 cases at this time. Three of the first mentioned were suspected and the others clinically tuberculous.

The future history alone can show whether the conjunctival reactions among the apparently healthy subjects betokened a state of greater danger of the outbreak of active tuberculosis in them than to the non-reacting individuals. It is too much to assert on the basis of these experiments that only those healthy persons reacted in the eye who had a more dangerous infection.

The conceivable causes of non-reaction to the conjunctival test must be regarded in estimating its diagnostic as well as its prognostic accuracy, and the value of such a standard is impaired for the following reasons: 1, Uncertain absorption of the tuberculin, due to lachrymation and spasm of the eyelids which may squeeze out the drop; 2, smallness of the dose required for safety, it being insufficient to react all the known first-stage tuberculous individuals; 3, variations in individuals as to local sensitization acquired from tuberculous infections of equal amount.

By repeated instillations in the same eye, as practiced by Roepke and others with increasing doses, no doubt a majority of all infected individuals would react as with the subcutaneous test.

Apart from the danger to the eye it is by no means proved that uninfected individuals can not be sensitized in this way even if but slightly.

This naturally leads to the consideration of the value of any tuberculin reaction. The wide use of the conjunctival and skin tests during the past year has impressed many clinicians for the first time with their limitations. A positive reaction can not be interpreted as an infallible criterion of existing disease. It only betrays the presence of the infection; whether recent or long healed is to be determined by other means. In reality reactions which take place only to large or repeated doses are of little clinical value considered apart from other symptoms. The absence of reaction after such methods is of far greater value in excluding tuberculosis. In a general way no doubt the more marked and prompt the reaction and the smaller the dose, the greater is the probability of the presence of an active or recent infection. In this way the conjunctival test may help, but it is possible that with suitable dilutions of tuberculin the cutaneous test will be found to have the same value for adults as for children. There will then be no advantage in the use of either the conjunctival or subcutaneous method except that when it is desired to produce a focal reaction at the site of disease the latter would be required. It follows from these reflections that only positive reactions to very small amounts of tuberculin have much diagnostic importance in the presence of disease symptoms except where focal reactions can be observed, while only absence of reaction to repeated and large doses has any value in excluding tuberculosis.

DANGER OF THE CONJUNCTIVAL REACTION

The reports from physicians who have employed the method and observed the precautions at first promulgated do not speak for a great risk to the eyes, yet the fact that harm can be done is undeniable and, in my opinion, should banish the promiscuous use of the conjunctival test. When governed strictly by the indications as to the absence of past or present eye disease or scrofulous history and the use of weak solutions not repeated, the risk is very slight, but as a few cases of corneal injury in alleged healthy eyes have been elsewhere reported, no one should employ the test without a feeling of responsibility. As compared with the subcutaneous test any injurious results that may follow are less easily ascribed to coincidences, even if justly so.

CONCLUSIONS

1. The conjunctival tuberculin test performed with weak solutions by a single instillation has some value in confirming the presence of tuberculosis in the early stages.

2. It has little value in confirmation when the symptoms of tuberculosis are only suspicious.

3. Its value in distinguishing "active latent" from healed tuberculosis in apparently healthy persons has not yet been determined.

4. Repetition of the test in the same eye has no advantage over the cutaneous and subcutaneous tests in the percentage of reactions produced and may be misleading and dangerous.

5. Repetition in the other eye by the author's method offers so little advantage that it can not be recommended.

6. The conjunctival reaction is unreliable for prognosis.

7. Used with the proper precautions, danger to the eye is slight and need not preclude the test when other methods are inapplicable, as when fever is present. It should be restricted to adults, since the cutaneous test has been found equally valuable for children and is harmless.

8. The cutaneous test by the simultaneous use of dilute and strong tuberculin offers a method of detecting at once or excluding tuberculous infection with no danger or inconvenience. Experience is needed to show the value of this method.

9. The subcutaneous test should be restricted to those cases in which a focal reaction at the site of the disease is desired and when the other tests result negatively.

NOTE.—The following may be consulted on this subject:
Wolff-Eisner, A.: Die Ophthalmo- und Kutan-Diagnose der Tuberkulose, Würzburg, 1908.
Petit, Leon: Le diagnostic de la tuberculose par l'opthalmo-reaction. Paris, 1907.
Roepke, O.: Die Ergebnisse gleichzeitig angestellte Tuberkulinreaktionen, Beitr. z. Klin. d. Tuberk., 1908, ix, No. 3.

THE MUNICIPALITY AND ITS RELATION TO PREVENTABLE DISEASE *

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It affords me great pleasure to attend this convention, devoted to the consideration of practical problems of administrative science as they relate to the municipality.

It is particularly appropriate that North Carolina, the first state during colonial days to move for independence with all that word implies, should maintain organized effort of this character for the betterment of social, economic and hygienic conditions among her citizens.

As a member of the Public Health Service of the United States the problems of sanitation are of greatest interest to me, and it is, therefore, deemed appropriate, in response to your invitation, to outline briefly certain responsibilities and privileges of the municipality in its relation to the health of the country at large.

The health of the people of a country stands in the front rank of public considerations. On it depend their individual health and happiness, and ultimately the material prosperity and very existence of the nation itself. With the rapid development of our country and consequent growth of urban life, there have arisen sanitary problems of increasing complexity, and their solution is necessary in order that men may live and mingle together without being a menace one to another.

The occupant of the isolated country home has with apparent impunity been able to disregard many of the laws of hygiene respecting his habitation and surroundings, since he spends the greater part of his life in the open air, surrounded by the natural agencies which destroy effete matter and render it innocuous through biologic changes. Even in the open country, however, certain diseases, such as malaria and hookworm disease, flourish, causing excessive morbidity and great economic loss. The dweller in the city, on the other hand, is constantly forced to take cognizance of conditions that breed disease. In addition he is oftener exposed to the communicable diseases by reason of more intimate association with his fellow-men.

Through intelligent cooperation, however, urban residence has become more comfortable, and in many places the duration of life in the city has been prolonged over that in the country. These results on the part of the municipality predicate, first, the enforcement of efficient ordinances for the prevention and suppression of communicable diseases, and, second, the inauguration of sanitary measures which have for their object the abatement of nuisances detrimental to life and health.

Under modern conditions of city life the individual is himself unable to exercise the full measure of protection, and it is only through official agency that this can be accomplished. I believe that governments will eventually hold themselves responsible for preventable diseases and reimburse the individual accordingly. In fact, this provision in a measure exists in Germany to-day, where through national insurance laws partial provision is made for the wage-earner and his family during periods of illness. If any man in this audience contracts yellow fever in North Carolina it is because somebody has been careless. Such carelessness can be prevented by governmental agency, and the victim should not be made to suffer pecuniary loss in addition to the danger he is forced to undergo by reason of his affliction.

If the public had to pay a man because it allowed him to contract a preventable disease there would be more interest in preventive medicine and a more rapid advance in public health work in this country to-day.

PREVENTION OF COMMUNICABLE DISEASES A FUNDAMENTAL NECESSITY

The primary object of sanitation is the prevention of communicable diseases. The Surgeon-General of the Public Health and Marine-Hospital Service, through representations made to the Secretary of State and presented to the Third International Conference of American Republics at Rio de Janeiro, in 1906, emphasized this fact and declared that the sanitation of seaports would obliterate foci of infection and thus obviate the necessity of expensive quarantine and the restraints it imposes on commerce.

The prophylaxis of these diseases is becoming better understood, and that community is culpable which neglects to take cognizance of modern advances and to eliminate conditions within its borders which foster infection. Among the more important measures to this end may be considered the prevention of promiscuous expectoration, destruction of tuberculous sputum, and condemnation of insanitary dwellings; the prevention of soil pollution and consequent elimination of hookworm disease; the destruction of mosquitoes and eradication of their breeding places for the prevention of malaria and yellow fever; the thorough disinfection at the bedside of dejecta of typhoid fever patients; the vaccination of all persons within the first year after birth and again before the end of their twelfth year for the prevention of smallpox; the registration of statistics of sickness and death; the humane isolation of cases of communicable diseases; the sanitary supervision of food and water supplies, and the hygienic disposal of sewage and wastes.

"DO NOT SPIT ON THE FLOOR; TO DO SO MAY SPREAD DISEASE"

The influence of tuberculosis on the hygienic and economic welfare of the community and state is becoming more and more recognized.

In the United States alone 150,000 persons die annually of the disease—more deaths than have resulted *from all the epidemics of yellow fever in our country* during the past 115 years. Statistics were quoted by the Secretary of the Treasury at the opening of the International Congress on Tuberculosis in Washington, September last, showing that during the last four years tuberculosis caused more than three times as many deaths in our country as occurred in action and from wounds received in action during the entire period of the Civil War.

Such facts are of great significance and have contributed to the recent sanitary awakening with respect to this disease. The movement against tuberculosis is now world-wide in extent, as was shown by the international exhibit recently held in Washington. This exhibit also demonstrated the utility of modern methods of control; but for their perfection and practical execution state and municipal activity are indispensable.

Through such activity the mortality from tuberculosis in the city of Boston has been reduced 55 per cent.

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* Presented before the Municipal Convention of North Carolina, Charlotte, N. C., Nov. 17, 1908.

within the past twenty years—a result that plainly indicates what may be done by other municipalities.

I believe that the future attitude of municipalities in the struggle against tuberculosis will be taken as an index of their sanitary enlightenment, and I would urge that every municipality participate in this campaign, the extent of which is now remarkable. In this work private philanthropy has been an important factor; but in order to prevent duplication of effort and loss of energy, municipalities should maintain a wise oversight and utilize all private initiative to the best advantage.

Tuberculosis is directly due to promiscuous expectoration, insanitary housing and ingestion of infected food. Ten years ago the cars and pavements of our cities were veritable spittoons. To-day, through anti-spitting agitation, they are reasonably clean passageways. The time is ripe for the enforcement of uniform laws and ordinances against the disgusting practice of spitting and other insanitary conditions which breed the disease.

Every child should be taught in the public school, "Do not spit on the floor; to do so may spread disease." Through the children we can hope to educate the fathers and grandfathers, thus exerting a favorable influence on the sanitation of our homes. Tuberculosis is a house disease, and authorities should see that insanitary dwellings are not allowed to continue as foci of infection and a menace to the community.

Defective ventilation should be absolutely prohibited, especially in houses offered for rent. I believe that the time is approaching when outdoor sleeping-rooms will be required, and when people will be forcibly prevented from smothering themselves in their own stale breaths. How better can tuberculosis be prevented when we know that pure air is practically a specific in its cure?

On the discovery of victims of the disease among the destitute it becomes the privilege and duty of the municipality to care for them and to prevent their becoming a source of infection to others. In the smaller municipalities sanatoria may not be feasible, but municipal dispensaries and house-to-house visits by the health authority can be maintained at slight expense. They are a valuable means of relief and offer an excellent opportunity for instituting necessary disinfecting procedures, which should invariably be required in all infected houses before their reoccupancy. In addition, they permit the spread of the gospel of pure air, pure food and right living—the most effective weapons in the warfare against tuberculosis.

DO NOT POLLUTE THE SOIL

Indirectly associated with conditions causing tuberculosis is the pollution of the soil. This latter practice fosters hookworm disease, a malady which is due to the presence of hookworms in the intestinal canal and which produces serious anemia, thereby predisposing to tuberculosis.

In the Philippine Islands the prevention of hookworm disease is regarded as the initial step in the solution of the tuberculosis problem, wholesale treatment of hookworm disease having recently greatly reduced the death rate of tuberculosis in certain limited areas.

Recent investigations made by Dr. Stiles, chief of the Division of Zoology of the Public Health and Marine-Hospital Service, in cooperation with the State Board of Health, have demonstrated the undue prevalence of hookworm disease in the sand districts of North Carolina. These studies have also emphasized the influence of this disease on the health and productivity of rural inhabitants and the consequent economic importance to the community at large.

There is no more fertile field in the sanitation of this state to-day than the suppression of this one disease, and it is incumbent on every infected community by law or ordinance to prevent soil pollution as well as to treat those individuals already infected. Treatment may be given by the establishment of dispensaries in each municipality, as is being done in Porto Rico, and at slight expense.

NO MOSQUITOES, NO MALARIA OR YELLOW FEVER

Malaria and yellow fever are propagated only by the mosquito, and the corollary, therefore, follows: no mosquitoes, no malaria or yellow fever. While the elimination of these insects presents a task the magnitude of which demands state aid, much also may be done by the municipality, as the yellow fever mosquito (*Stegomyia calopus*) particularly is domesticated and breeds only in artificial bodies of water, such as in cans, barrels, etc., found around habitations. In addition, mosquitoes do not voluntarily migrate any considerable distance from their breeding places.

It is, therefore, a part of good municipal sanitation to do away with such breeding places and to enforce efficient screening against both flies and mosquitoes, the former being also a known agent in the transmission of typhoid fever.

NO RATS OR FLEAS, NO PLAGUE

The rôle of insects and vermin in the transmission of communicable diseases is becoming more and more emphasized. Vermin and domestic animals have since antiquity been known to suffer with bubonic plague, and there can now be no doubt that the disease in rats is identical with that in man. Furthermore, these animals are responsible for the transmission of the disease to man.

During a tour of duty in Hongkong, China, it was my privilege to observe several striking illustrations of this fact. The observation was also made that in infected districts rat plague always precedes the disease in man and that the infection persists among rats for some time after human cases have ceased to occur.

In the fall of 1901 systematic examinations of rats, collected at random through the city of Hongkong, were made by me in company with Dr. Bell of the Civil Government Hospital, and it was observed that the disease lingered among rodents long after the last human case was reported.

Many facts indicate that an intermediary agent is responsible for the transmission of the disease from rat to man. Since then observations of Thompson in Australia have gone far to corroborate this belief, but it remained for the British Plague Commission in India to prove by a series of brilliant experiments that the rat flea *Pulex pallidus*[1] is capable of carrying plague from one rat to another. They also demonstrated that the closest contact of plague-infected animals with healthy animals, in the absence of fleas, does not give rise to the disease among the healthy animals, but that if fleas are present the infection will spread from animal to animal until all are infected. Animals placed in plague-infected houses but surrounded by sticky fly-paper did not develop plague, while animals not so protected died of the disease. During these experiments many plague-infected fleas were captured on the fly-paper.

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[1] Journal of Hygiene, vi, No. 4.

In view of these observations, there can be no doubt that in the transmission of plague the flea is the intermediary between rats and man.

With the view to determining whether the particular flea used in these experiments exists in seaports of the United States, investigations are being made by the Public Health and Marine-Hospital Service, and it has been shown thus far that such is the case in a number of municipalities.

While no case of plague has ever been reported in North Carolina, its consideration here is pertinent, as our country has twice been visited by the disease, and fifty-one countries have been infected since the present pandemic began in Canton, China, in 1894.

Such visitations of the disease are of national importance, and every municipal health authority should be on the lookout for its appearance and be prepared to institute preventive measures.

These, in brief, consist in the discovery of cases among rats or human beings, the depopulation and disinfection of infected houses or localities, the destruction of vermin therein, and the rendering rat-proof and sanitary all buildings occupied by human beings. By these means apparently brilliant results have been accomplished in San Francisco and elsewhere, and it is through them that further spread of the disease in the United States has been prevented.

TYPHOID BACILLI SHOULD BE KILLED IN THE BED-PAN

The undue prevalence of typhoid fever in the United States is a notorious fact, and its prevention is a duty devolving on every community. The infection is contained in the dejecta of typhoid fever patients and is most easily destroyed by disinfection in the bed-pan. It is the province of the attending physician to see that this measure of prophylaxis is observed, and he should be held responsible for its observance by means of ordinances properly enforced. In one city in Holland this all-important duty is performed daily under the supervision of the proper health official after due notification of the disease—an arrangement that might with advantage be adopted in the larger municipalities of our country.

In the absence of such precaution the infection may be transmitted by means of food, flies or fingers. Compilation of statistics made by Passed Assistant Surgeon Trask of the Public Health and Marine-Hospital Service during the past two years have shown that infected milk alone has been responsible for more than 500 epidemics of typhoid fever, scarlet fever and diphtheria within the past fifty years. It is necessary, therefore, that this universal food should be produced and sold only under competent sanitary supervision, and when such supervision can not be maintained, pasteurization should be the universal rule if we would preserve the lives of our infants and children.

Such supervision should include other foods capable of conveying infection, as well as water. It is a singular fact that our barbers and other tradesmen in many places are required to secure licenses to pursue their vocations, while our cooks and venders of foods continue their calling absolutely without sanitary restriction, although in repeated instances they have been proved to be living reservoirs of transmissible infection.

That typhoid fever is a communicable disease is well known, and studies carried on by Rosenau, Lumsden and Kastle in the Hygienic Laboratory of the Public Health and Marine-Hospital Service at Washington during the past three years have led to the conclusion that isolation of patients suffering with the disease is necessary to its eradication.

HUMANE ISOLATION OF COMMUNICABLE DISEASES NECESSARY

I purposely omit detailed reference to diseases such as diphtheria, measles and scarlet fever. Their dangers are well known, as is their method of handling. Besides, they are only unfortunate incidents in the life of the community as compared with tuberculosis, malaria, hookworm disease and typhoid fever, which constantly affect its health and prosperity.

With the advent of certain of these diseases, isolation of the sick becomes necessary in the interest of the public health, but this does not imply that they should be confined in a pest-house and undergo additional hardships because of their misfortune.

The very word "pest-house," as well as what it stands for, should be abolished. Patients should be cared for in a humane manner under authority of law or ordinance, and access should be had to comfortable isolation hospitals if the sick can not be properly isolated in their own homes. It is time that our people should take pride in their hospitals, clean alleys and well-ventilated houses rather than in public monuments, municipal buildings, etc.

In order to carry out isolation effectively, there must be prompt and accurate notification of the infectious diseases as well as causes of death.

MORBIDITY AND VITAL STATISTICS THE BOOKKEEPING OF SANITARY SCIENCE

There is no more urgent duty in the domain of sanitation to-day than the accurate record of morbidity and mortality statistics, which are the bookkeeping of sanitary science. They are the fundamental basis of all effective sanitation, and it is the province of local governments to insure their accurate collection. Notwithstanding this fact, the collection of such statistics in the United States has been exceedingly unsatisfactory, and to-day there are but fifteen states, seventy-eight cities and the District of Columbia included in the registration area.

The first law to my knowledge in this country for the registration of vital statistics was enacted in the colony of Virginia in 1631. In 1907 a bill for the registration of such statistics in the state of Virginia was defeated in the legislature—not a very brilliant commentary on the advance in sanitary practice during the past two and one-half centuries.

In North Carolina, on the other hand, provision in law now exists for the collection of morbidity and mortality statistics. Its enforcement is of vital interest to the state, and there can be emphasized before this body no more important measure from the standpoint of sanitary administration.

While the reporting of infectious diseases is a duty every physician owes to his community, it is the part of good municipal government to see that it is done, enforcing the law by means of penalties if necessary.

Provision also exists for the collection of vital statistics, and I would urge greater effort to render them accurate. This duty devolves primarily on the municipality, but the state and the nation are also charged by law with their collection, and the state board of health should be provided with facilities to see that this duty is faithfully performed.

Both the state and municipal authorities should be sustained by public opinion and provided with adequate funds to carry on their work. This consists in the strict enforcement, in every community, of ordinances requiring burial permits before a corpse can be buried or removed. Such permits should be based only on a proper death certificate signed by the attending physician, and falsification or failure of record of either document should be a punishable offense.

The data thus accumulated are enduring records of the effectiveness of preventive measures and serve as a guide in the adoption of further necessary sanitary laws and ordinances.

THE ABATEMENT OF NUISANCES NECESSARY TO PREVENT DISEASE

As previously stated, the second great function of municipal sanitary administration is the abatement of nuisances, which have been defined as "whatever is dangerous to human life or health, and whatever renders soil, air, water or food impure or unwholesome."

From a sanitary point of view "none of us liveth to himself and no man dieth to himself," and this especially applies to the individual, his habits and surroundings as they affect the health and comfort of his neighbors. Community life, therefore, implies sanitary restraints, especially in regard to the disposal of waste products.

HYGIENIC DISPOSAL OF SEWAGE AND WASTES

With the installation of a modern sewerage system, an important phase of the problem has been met, as the individual's responsibility is assumed by the municipality. The construction of such a system is an engineering problem, but after the work of installation is completed the municipality must exercise authority over its operation in order that no part of it may become a nuisance. Then, too, the final disposal of the sewage must be accomplished in a manner to insure against the pollution of natural bodies of water.

The common law grants to riparian owners the rights to water from streams in its natural state. It may, therefore, be postulated that no man or community has the right to defile our rivers or lakes with sewage or wastes, and it is the duty of the state or federal government, depending on whether the waterway is intrastate or interstate, to prevent such pollution.

Municipal crematories and sewage disposal plants are thus made necessary, and the latter should be constructed so as to make use of septic tanks, followed by filter-beds or broad irrigation.

In the absence of a sewerage system, every householder must, of necessity, provide for the disposal of effete matter, but the method should be subject to sanitary regulation, and ordinarily he should have the choice of only two methods, viz., bacteriologic purification by means of the septic tank, or the pail system for slops and dry earth-closet for human excrement.

In the former, sewage is decomposed through the action of anaerobic bacteria, or bacteria which grow in the absence of oxygen, in a septic tank, and prepared for final oxidation, that is, the bacteria in the tank grow in the absence of oxygen and really cause putrefaction. The mass is decomposed and for the most part becomes liquefied. The resulting liquid is then allowed to flow over land or filter-beds when through the action of aërobic bacteria it is oxidized and rendered harmless. Such tanks are well suited for use in small towns and isolated houses, and a large number are now in operation in different parts of the country.

In the dry earth-closet system, the excreta are exposed to loam, or ashes, which, through biologic changes, cause complete disintegration of the effete matter and render it odorless and harmless to the community. With the use of this method, a separate receptacle must be provided for slops and kitchen waste.

The method to be adopted must depend largely on local conditions, and in any event sanitary supervision on the part of the municipality should be maintained.

In the sanitation of cities and towns as nearly uniform measures as possible should be practiced. A better knowledge of the modern principles of hygiene will eventually bring this about, but for their speedy adoption uniform laws and ordinances are indispensable, and it is through the agency of such organizations as this that unity of action and model sanitary laws might be secured. The question finally arises: Who shall exercise the necessary supervision and be responsible for the enforcement of all these health measures?

TRAINED HEALTH OFFICERS NECESSARY

In this and many other states, executive power in local sanitary matters has been delegated to the municipality, and in such matters the state health authority only acts in an advisory capacity. It is important, therefore, that each political unit be provided with a trained sanitary expert capable of advising with the mayor and enforcing existing health laws and ordinances.

In no other way will the public health problems of the country be met in an active and scientific manner. In this respect, our progress is unsatisfactory as compared with that of England, where every small town or county has a medical officer of health, who is a doctor of public health and possesses a knowledge of sanitary practice not required by the practicing physician.

In order that physicians may undertake this work with the view to making it their life occupation, it must be made more attractive through education of the public as to its necessities.

Public health officials, including municipal health officers, must in future be selected with the view to permanent service, and appointments should depend, not on political preferment, but on professional qualifications and executive ability. In the efficient discharge of his duties, a medical officer of health must possess these attributes in more than ordinary degree.

In the interest of the public health he may, of necessity, antagonize selfish interests, thus jeopardizing the comforts of himself and family. For these reasons his position should be secure, his removal should only follow dishonesty or inefficiency, and he should, whenever practicable, be relieved of the necessity of private practice.

There is increasing demand for further protection of the public health, and I believe that preventive medicine will eventually be practiced in much greater degree by municipal, state and federal governments.

To secure men capable of doing this work, provision must be made for advanced instruction in preventive medicine. There is now practically no provision for such advanced study, and no institution in our country offers a course leading to the granting of the degree of doctor of public health.

A NATIONAL SCHOOL OF HYGIENE NEEDED

With the view to meeting this deficiency, a bill has been introduced in Congress to provide, among other things, for a national school of hygiene in connection with the Public Health Service at Washington. It is intended that the advantages of this school shall be available to health officers only, and that, on completing the prescribed course of study, students shall be given certificates testifying to such completion.

The bill has been passed by the Senate and favorably acted on by the Interstate and Foreign Commerce Committee of the House of Representatives, and it is fully expected that it will be enacted into law.

The establishment of this school of hygiene will encourage those best fitted to undertake public health work and bring about continuity of service in the field of preventive medicine. This provision will also insure closer cooperation between the national public health service and state and municipal health authorities and insure further uniformity of action in matters pertaining to the public health.

Unity of action is necessary in the struggle against disease, and it can be brought about only through efficient cooperation of existing national and local health agencies.

HOW, THEN, CAN THE NATIONAL HEALTH SERVICE AID STATE AND MUNICIPAL HEALTH AUTHORITIES?

The government of the United States is unique in that it blends national sovereignty and local self-government in such manner as to preserve the integrity of each.

While police powers with respect to sanitation within the states have been reserved to the states themselves, the national government is responsible for insanitary conditions affecting more than one state or territory, and in the exercise of its authority it can protect and aid local governments without usurping any of their powers or privileges.

As I see it, the cardinal duties of the federal government in conserving the public health are, first, the prevention of the introduction of contagious and infectious diseases from without as well as their spread from one state or territory to another; second, the investigation of communicable diseases, the conditions favoring their spread, and the methods necessary for their prevention; third, the dissemination of sanitary information thus acquired; and, fourth, cooperation with state and municipal health authorities for the protection of life and health. All these measures are of direct interest to municipalities, and their enforcement by the national government will result in improved municipal sanitation throughout the country. Provision now exists in law for the performance of certain of the duties outlined above, but additional legislation is necessary to enable the national health service adequately to meet the demands made on it in the interest of the public health.

At the same time there must also be granted more authority to state and municipal authorities if we would attain the standard of sanitary excellence which is to be expected of us.

In this address I have endeavored to point out the most important factors that operate against the public health. I have tried to indicate what the local authorities can do to prevent disease and to prolong life in the communities they govern.

The problem is a question of education. Men must be taught the necessity of sanitation and the dependence on it not only of the health, working efficiency and well-being of themselves and their families, but of the future prosperity of the communities with which they have cast their lot.

A community in which there is a low standard of public health can not escape race deterioration and with it an inevitable loss of industrial prosperity.

If the people are convinced by education of the importance of sanitation the barriers of prejudice and carelessness will yield and laws not only will be passed but, what is more important, will be observed.

What is necessary, then, is a propaganda founded on the basis of well-known hygienic facts and extended to every class of population. The active work in this propaganda must be pushed by the municipalities and local authorities whose representatives I have had the pleasure of addressing to-night.

THE PLANNING AND CONSTRUCTION OF HOSPITALS FOR SMALLER CITIES AND TOWNS *

MEYER J. STURM, B.S.
CHICAGO

The ever-increasing demand for hospitals has brought into existence a new specialty, that of hospital architecture. Those who follow this new branch of the architectural profession have not found their road an easy one, inasmuch as each individual who has had the direction of the building of a hospital has his fad or hobby to work into the general order of things. It may be safely said that there has not been a hospital planned in the last twenty years wherein there has not been something injected of these hobbies and foibles, which are expensive at best and often absolutely unnecessary.

The general idea, the initial thought for the planning, is practically the same for all hospitals—the greatest amount of serviceability at the lowest cost consistent with a first-class structure, and a minimum of fixed and maintenance charge for the maximum work to be done.

Primarily all hospitals are the outcome of something that has already been done. In this work much that is original has been introduced, and it is safe to say that not one hospital which is being built to-day but has some innovation which is the outcome of existing conditions, either good or bad.

This paper will deal with hospitals containing from 20 to 150 beds. It is a common error to figure the cost of a hospital by the number of beds it contains. The number of beds in any hospital is the index to the scope of the building, but does not in any way give an idea of its size. For instance, a hospital with but 2 wards, containing 10 beds each, would be a 20-bed hospital; but while it fulfills all the requirements of such an institution, its cost of construction, its maintenance and organization are wholly out of proportion to a hospital with 20 private rooms.

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* Read before the American Hospital Association, Toronto, Can., Oct. 1, 1908.

Often, too often, the argument is advanced that $1,000 per bed is approximately correct for the calculation of cost of a hospital, but this is a fallacy.

Dr. A has a hospital in Allentown, of ordinary construction, containing all modern conveniences, and 20 beds, which cost $18,000 complete. Why, therefore, it may be asked, can not Dr. B build a hospital of 20 beds in Bennington for $900 per bed? But as a matter of fact Dr. A's institution contains 2 wards of 8 beds each and 4 private rooms, whereas Dr. B wants no wards, but 20 private rooms. Moreover, Dr. A's 2 wards, if divided, would make but 2 rooms each, which would mean that if his building were divided into the units that Dr. B requires he would have practically 8 private rooms, or 10 at the most, cost $18,000.

How, then, can we arrive at a basis for figuring such buildings so that there may be some uniform method of ascertaining their cost? No sliding scale or rule of thumb can be devised for this.

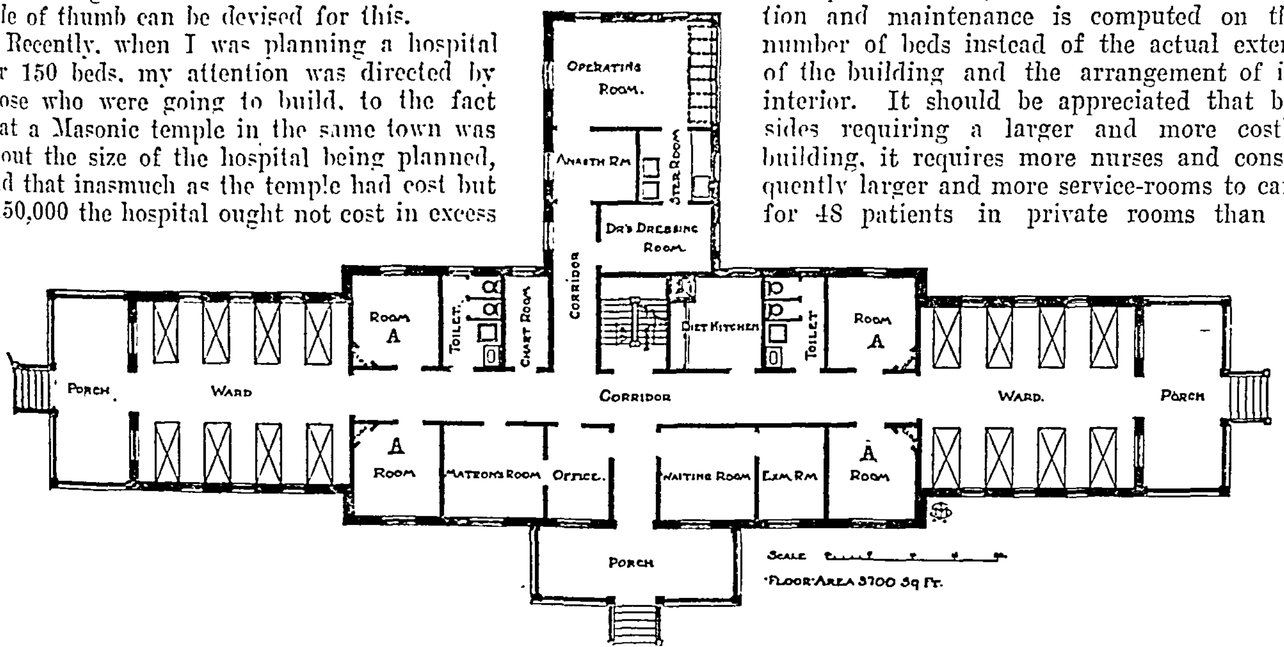

Fig. 1.—Plan of a 20 bed hospital, containing 2 wards of 8 bedseach, and 4 private rooms. A 20-bed hospital with 2 wards of 10 beds each would shorten the building by eliminating rooms "A" andenlarging the 2 wards sufficiently for the 2 additional beds in each, giving a floor area in such a hospital of 3,400 square feet.

Recently, when I was planning a hospital for 150 beds, my attention was directed by those who were going to build, to the fact that a Masonic temple in the same town was about the size of the hospital being planned, and that inasmuch as the temple had cost but $150,000 the hospital ought not cost in excess of that amount, despite the fact that the latter was 6 stories in height, divided wholly into private rooms and suites with baths, and contained an unusual amount of plumbing, electric work and special contrivances, which probably amounted to six times that contained in the former. This hospital will cost, owing to advantageous contracts, about $1,000 per bed.

The only definite basis for figuring the cost of a hospital is to ascertain the number of beds required, private rooms and wards to house these, the extent of administrative rooms (by which is meant offices, diet kitchens, toilet- and service-rooms and servants' and nurses' quarters, if no separate provision is made for the latter); then decide what would be the best material or method for building, have preliminary drawings made, and figure the approximate cost. No architect or contractor, or even a hospital superintendent, however much he may have to do with the erection of such buildings, can answer the question, "How much will a 20-bed hospital *cost?*" or "How much will a 20-bed hospital cost containing an office, nurses' rooms and diet kitchen, 2 6-bed wards, or 3 4-bed wards and 8 rooms with the necessary rooms that go with them, 2 operating-rooms, etc?" A wide guess can be made, but there is such a difference of opinion as to what constitutes proper arrangement and size of rooms and the thousands other points, that it is practically impossible to determine the cost without more specific data. All this applies particularly to the smaller hospitals, for in the greater number of instances the idea of having a hospital precedes the obtaining of funds for its erection by so great a period that there is no basis for exact figuring at the outset.

I wish I could bring about a realization of these conditions. In each case there is an individual problem for solution, generally with no definite knowledge of what is entailed on the part of the founders. A hospital is ordered which shall contain 20 beds or 8 beds, or perhaps 150 beds with so many wards and so many private rooms, or all wards or all private rooms, some with private baths; and the cost of construction and maintenance is computed on the number of beds instead of the actual extent of the building and the arrangement of its interior. It should be appreciated that besides requiring a larger and more costly building, it requires more nurses and consequently larger and more service-rooms to care for 48 patients in private rooms than it would to care for the same number in 8 wards of 6 beds each.

There can be no difference of opinion on one point in the construction of hospitals, namely, the obtaining of the most in construction at the minimum expenditure. The single building is the best for this purpose for many reasons. The first requisite in planning a hospital is to make the building a basic unit so that while in itself it contains everything complete for such an institution, it shall be a nucleus for future enlargement without in the least disturbing the general arrangement.

In the latter would be included the administration department, the toilet- and service-rooms and the operating and kitchen departments.

PRIME REQUISITES

In a hospital of simple plan this could be readily accomplished by extending along the main axis. But, primarily, this basic unit should be built so that it fulfills certain fixed requirements as follows: 1, compactness; 2, the maximum of specific advantages in construction at the least cost; 3, the maximum efficiency in maintenance at the least possible cost.

1. Compactness can be obtained by building on a regular plan, superimposing stories of similar arrangement on each other, so as to economize plumbing and suiting the size of rooms and heights of ceiling to the needs of the hospital, basing the calculation for these on an intermediate rather than a minimum or a maximum.

2. Advantages can be secured at the least cost by the elimination of all unnecessary features which are usually adopted to "make a show" or, because some institution with unlimited means has these luxuries, to gratify a whim not at all in accordance with utility. I do not wish it to be understood that I advocate prisonlike hospitals; but marble and tile walls and ceilings, costly woodwork, offices and elaborate board-rooms do not serve their purpose to any better advantage and probably not as well as neat, simple and homelike treatment.

3. The maximum efficiency can be attained at the least cost by the erection of the buildings on a simple plan which contains the first two requisites, namely, compactness and maximum of specific advantages and a conservation of the so-called working parts of the hospitals so as to make what might be called the mechanical plant simple in installation and operation.

The different items under this heading have been taken up separately, namely, the superimposed bathrooms, service-rooms and toilets, the greatest facility in handling the food from the main kitchen to the diet kitchen and from the special diet kitchen, the drugroom, the installation of the signal systems to expedite the work of nurses and attendants, and proper arrangement for the facilitating of the routine work; also the installation of the special apparatus on each floor so that each may be handled independently without the increase of labor or the necessity of large quantities of supplies.

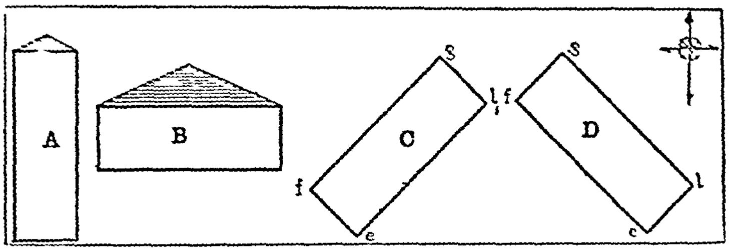

Fig. 2.—Diagram showing position of solid rectangular hospital building. The shading in A and B shows that the north walls of buildings so located receive practically no sunlight.

This particularly applies to such apparatus as bedpan sterilizers, warming closets and general preparation tables in service-rooms, linen-room and diet kitchen arrangements.

The organization of hospitals I need not dwell on at any length, as this subject has already been fully treated,[1] and it would be somewhat aside from the scope of this paper to give the many methods followed for such organization.

There is one subject which requires special comment. After the organization is perfected the selection of a building committee should be carefully considered. The fewer members there are on such committees the better the results in all particulars. A good working committee of three can accomplish considerably more than a larger committee, and if the chairman of such a committee is given discretionary powers to make all preliminary arrangements it is needless to say that this will expedite matters. The building committee of three can then take up the final arrangements and adhere to a definite system of developing the needs of the hospital for the present and for the future.

In general, it is a safe rule to follow that the time expended on preliminary plans should be sufficient to develop all of the ideas perfectly before the final plans are started. This will obviate the necessity for changes which are difficult to make as well as expensive, and will result in the completion of the plans and the consequent expediting of the erection of the building.

The specifying of materials for the building should be left entirely in the hands of the hospital expert, who in all instances ascertains the local conditions of both labor and material, and whose wide knowledge of the subject gives him the advantage of being able to make the fine discrimination between what is best suited at the least cost, and what would be considered as luxurious or expensive and would under no circumstances serve the purpose to any greater advantage.

LOCATION

So much has been said about the location of hospitals that only the general requirements for such location are given here. The larger the ground and the farther from the street that the hospital is placed the more advantageous is the location. The principles which have been laid down so often are that there should be: 1, an abundance of sunlight; 2, an absence of noise; 3, freedom from dust; 4, freedom from smoke; 5, a natural system of ventilation; 6, a proper disposal of all sewage; 7, safety from fire; and, 8, accessibility.

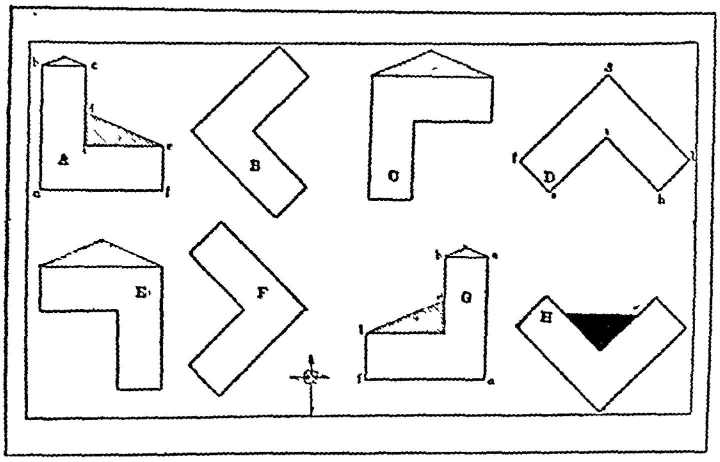

Fig. 3.—Diagram showing position of L-shaped hospital. Shading denotes degree of shade thrown on north sides of buildings.

For smaller hospitals, up to 150 beds, depending entirely on conditions, either the solid triangular plan or the L-shaped plan is the best for many reasons. Either of these forms is readily enlarged with the conservation of all the requirements in building and maintenance mentioned. For solid quadrangular buildings the positions of those marked A, C and D (Fig. 2) are especially recommended. In A the slight shading at the north of the building indicates that between 8 a. m. and 4 p. m. there is practically no sunlight at this wall, but this would be of no great consequence, inasmuch as there could be east and west windows in the rooms facing this part of the building, and as the operating-rooms are always placed to the north the direct north and south plan shown at A is the one that is usually adopted. The one at B running east and west is not recommended under any circumstances, for the shaded portion shows that from 8 a. m. to 4 p. m. during the entire year, and for a great period of the year, that side is in shadow the entire time, meaning that the rooms on this side are practically without sunlight.

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[1] Ochsner, A. J., and Sturm, M. J.: The Organization Construction and Management of Hospitals, Cleveland Press, Chicago.

For L-shaped hospitals the positions of those shown at B, D or F (Fig. 3) should be used, and these are particularly recommended where there is an extent of ground because such a building is easily enlarged and can be placed in such manner that the entrance would be in the angle at I in D, making a very sightly and even imposing structure or one having a homelike and quaint appearance.

There are only two ways in which U-shaped hospitals can be placed so that every room obtains sunlight: the one shown at E is used quite frequently, but this plan is not applicable to hospitals of less than 100 beds.

Locations like those shown at A, B and H (Fig. 4) should be avoided, as there are deep shadows thrown at all times where the black is shown. Figure E can be used, inasmuch as all of the service-rooms can be placed on the side where there is shade, including the stair hall and elevators and the room for eye patients, and on the top floor the entire working department.

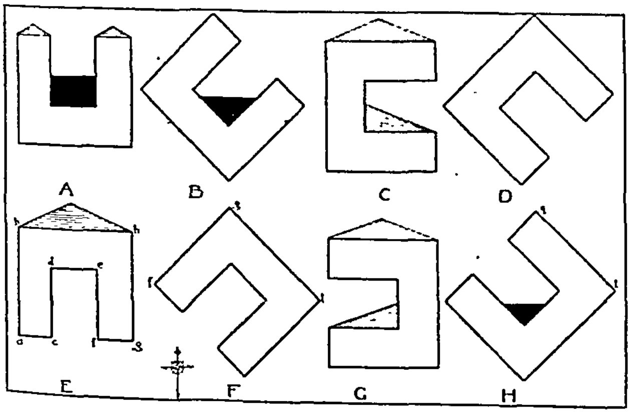

Fig. 4.—Diagram showing position of U-shaped hospital and the amount of shade thrown.

MASONRY

In the construction of hospitals only those points which are of special interest need be mentioned. Attention is called to the necessity of waterproofing the foundations so as to exclude any possibility of soil gases and dampness which will be found even in the dryest locations. The illustrations (Fig. 6) show the method in which this should be done, running the waterproofing under the basement floor to connect with that of the walls. This is to be done with successive layers of burlap and marine cement.

CARPENTRY

It is hardly necessary to state that when the building is being trimmed the minimum of woodwork should be put in, on the supposition that all hospitals constructed in the future are to be fireproof, and that even if they are not entirely fireproof, the rule holds that the trim should be simple in design and that there should be as little of it as possible, as it requires constant attention.

Open-grained woods are not recommended. The close-grained woods like maple and birch are best adapted to hospital use. It is necessary to treat open-grained woods with fillers, whereas with the close-grained woods a harder and smoother surface can be obtained.

The doors can be without panels, but this is a matter of taste rather than of expediency, except for the fact that without panels there are no moldings to catch dust and, therefore, less cleaning is necessary, and one of the objects in designing the trim and finish of hospitals is to do away with as much labor as possible. Where this can be reduced to a minimum by the simple expedient of excluding the moldings of panels it is well to do so.

FIREPROOFING

Assuming that all hospitals should be fireproof, the question arises, what is the best as well as the cheapest material, and the best and quickest method of erecting such a building? Shall the building be built entirely of reinforced concrete or entirely of brick and clay materials with structural steel members, or are the walls to be built of brick, the floors of reinforced concrete and the partitions of tile or one of the plaster products? Local conditions and the distance from the base of supplies, the experience of local contractors, and in some instances the minor details which so often determine such questions, naturally must be considered.

The selection of materials is, after all, only a question of expediency so long as it is borne in mind that the building must be fireproof. In a wide range of experience it has been found that building the foundations of concrete and the superstructure of brick with reinforced concrete floors and reinforced structural members, and by making the partition of hollow tile or one of the plaster products, under ordinary conditions, will fulfill all requirements. In the small nonfireproof hospitals, large, easily accessible porches should be built, having stairs to the ground.

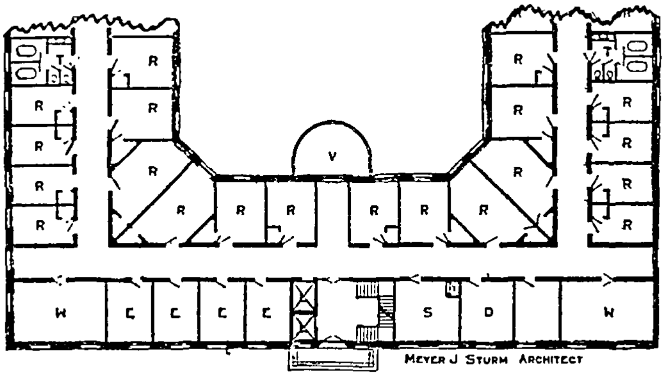

Fig. 5.—Developed plan for U shaped hospital. In the development of the U-shaped hospital, by removing the partition between the rooms, wards are formed on such floors as required. The wings on either side of the center are extended to the required length for the capacity of the hospital.

PLUMBING

So much has been written on this subject, and the progress has been so rapid in this branch of construction, that it is unnecessary to go into detail, but there are a few points which are worthy of consideration. The first requisite is necessarily a good drainage system which will work perfectly and which has an outlet of sufficient capacity and at a distance below the sewerage system of the building adequately to dispose of the sewage at all times.

The size and pitch of all drains should be carefully calculated. Tile sewer-pipes should never be used inside the building. In the installation of water-supply, exact calculation should be made for the quantity of water for all of the fixtures and should be designed to prevent all water hammer or noise, both by putting air-chambers on the pipes themselves and on each supply on the fixture. There should be sufficient shut-offs so that all the supplies can be properly taken care of.

In the selection of fixtures, tubs of the pattern which are set to the floor are recommended, as these can be put into the floor at the base, thus precluding the possibility of the lodging of dirt under the tub. All tubs should stand free so that a person can have access on at least three sides. The equipment of toilet and bath and service-rooms should contain slop-sink, slop-hopper and bed-pan sterilizer.

The service and toilet-rooms should be separated so that there is no interference of patients and nurses, and also that the odors from the service-rooms may not be offensive, even momentarily, in the toilet-room. Between these two rooms there should be a space of about three feet to facilitate access to all of the plumbing-pipes and wires, and to supply the ventilating ducts for the ventilation of the toilet and service-rooms on all floors.

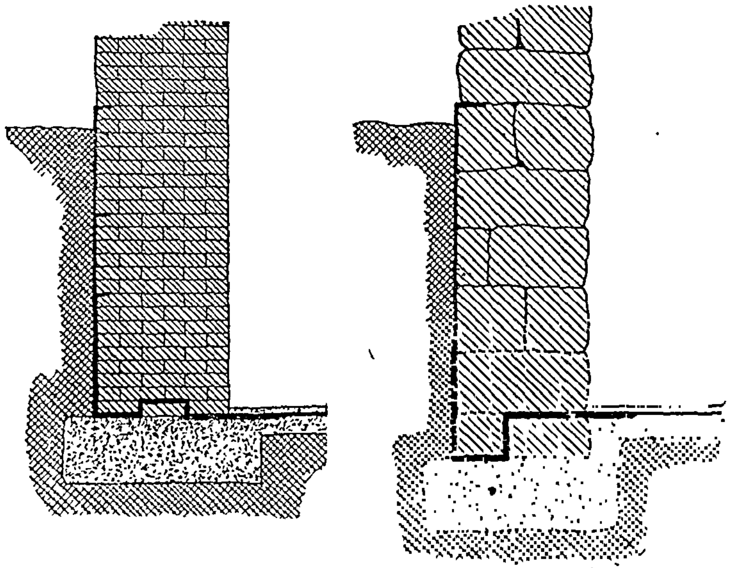

Fig. 6.—Proper method of waterproofing walls and floors in hospitals. It is necessary to waterproof walls and floors to exclude all dampness and soil-gases.

The fixtures in rooms so arranged can be set so that all sides are accessible. The closets are of the wall pattern in which no part of the fixture is on the floor, the slop-sink being of the ordinary type and the slop-hopper having a deep water seal with the flush and water-supply operated by the foot-pedal valves, so that the nurse's hands are free.

The fixtures for operating-rooms, the kitchen and other departments need not be gone into here, as they are usually a matter of individual choice.

PLASTERING

What is the best manner of treating the walls and ceilings in hospitals? This would depend entirely on the plastering of the walls themselves primarily, but it is a universally understood fact at present that the only economical plaster to use is the prepared hard wall plaster. After the walls are thoroughly dry, they should be treated with a solution which will preclude any possibility whatever of the paint or enamel being chipped, stained or damaged by the action of the partition material and the brick walls, and then they should be given at least three successive coats of the paints and enamels specially prepared for this purpose.

PAINTING

The use of gloss enamels and of paints left in the gloss is not to be recommended, inasmuch as these are hard on the eyes. The dull-finished enamels are as easily cleaned as the high gloss, although they are more susceptible to finger-marks, but this is of minor importance when the effect on the eye and the disconcerting reflection are taken into consideration. Paints should not be stippled to take the gloss from the last coat, but should have a dull finish when applied. Varnish on woodwork can be left in the gloss.

ELECTRIC WORK

The matter of wiring need not be dwelt on, except to say that all such wiring for power, lighting and even telephones should be done in conduits so that, in case any of the circuits need repairing, the wires can be easily withdrawn and new wires run into the pipe with the least possible delay and expense. In fireproof hospitals this is the only method which can be used.

Cut-out boxes, or centers, as they are sometimes designated, should be of the buss-bar type. These should have branch-circuit switches. These circuit switches are important, inasmuch as, if they are used, it is not necessary to shut off the current from the entire floor when repairs are to be made on one or two lights on a given circuit. Only the circuit controlled by these secondary switches need be put out of service for the short time it takes to make repairs, instead of inconveniencing every one on the floor. Each floor should be independently controlled from a cut-off on that floor only. In this way each floor is independent of every other floor, and each circuit is independent of every other circuit, a condition which has its self-evident advantages.

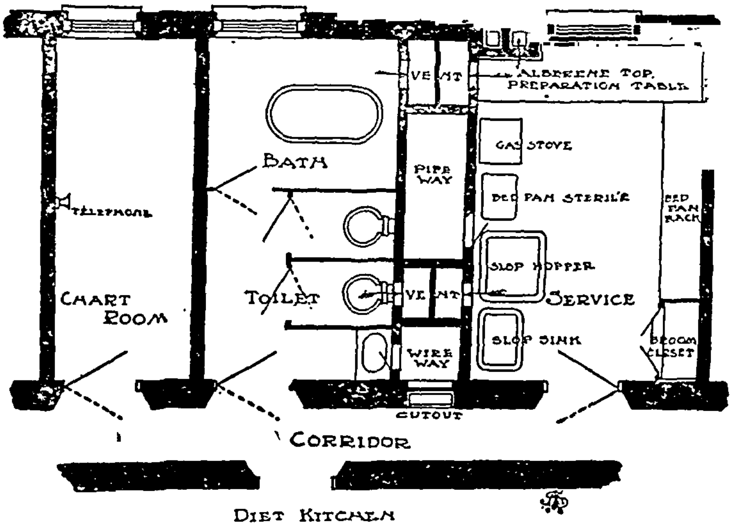

Fig. 7.—Plan of toilet and service-room, showing proper arrangement and fixtures required. There should be in the service-room an Alberene table for the preparation of hot-water bags, douches, etc., also a broom-closet for the hanging of mops, brooms and cloths, and a special sink for keeping flowers over night.

The number of outlets for fans and lights in rooms is a matter which must be determined for each case, but there is no question that in the service-rooms and operating-rooms and even diet-kitchens there should be full circuits sufficient to take care of the ever-increasing demand for electric apparatus.

Probably the principal part of the installation of electric work, aside from the lighting, is the installation of a system for calling nurses. In Figure 8 is shown in simplified form the best system that has been devised for this purpose for the following reasons: It requires only the ordinary wiring that is necessary for the straight electric work, and is absolutely quiet and positive. There are no bells, drops or other complicated mechanism in this system, which consists merely of an electric light over the door, preferably with a red globe so that it can be seen both night and day, and either an extension cord with a push-button or a switch which is at the bedside of the patient and, when operated, lights the lamp over the door, at the same time lighting a pilot-light in the diet-kitchen or in the nurses' room or chart-room, as the case may be: or, if desired to have the light at all three stations, this can be done by simply putting these lights in multiple with extensions.

It is absolutely necessary for the nurse to go to the bedside of the patient before the light over the door and the pilot-light and its extensions can be extinguished: and the pilot-light can not be extinguished until all the lights on the floor have been put out, namely, by the nurse going to the bedside of each and every patient who has called, attending to their wants and extinguishing the light from the bedside.

Telephones in hospitals should have some arrangement by which they can be connected to the outside telephones, but the inside telephones should be of the plug pattern and should be of the intercommunicating, non-interfering type so that conversation can be carried on between any two stations without interference from any other station.

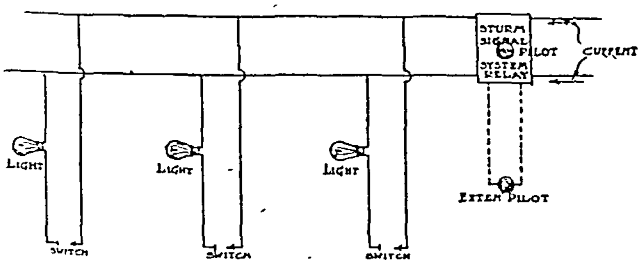

Fig. 8.—Wiring diagram for signal system for calling nurses by electric light.

HEATING AND VENTILATION

Probably the most vital subject, aside from the general arrangement of a hospital, is ventilation and heating. The one method of ventilation which is beyond all dispute the best both in simplicity, efficiency and economy is what is known as a natural system of ventilation, namely, the wind, or, as it is sometimes called, perflation. Artificial ventilation at best can be only a poor substitute for the open window or some substitute for this which will give direct outside air.

The method now in vogue consists in taking air into a building, running it across hot coils and scorching it, then running it through some sort of air-filter or air-washer to take out the particles of dust, then letting it run across another radiator and scorching it again, and then unmercifully spanking it until it is supposedly doing our behest; but, turning and twisting and fighting against this unseemly conduct on the part of the spanker, it goes its devious ways, sulking and often turning about and going in the opposite direction against all coaxing and importunities. By the time the air is ready to enter on its duties it goes with such impetuosity or so slowly that it is of little use for its intended purpose.

In this climate and as far south as the extreme southern states, the open window can be used only for several months in the year, and some other means must be devised for taking care of the ingress of fresh air and the egress of foul air during the remainder of the colder months.

I do not advocate at all the heating of hospitals by the same means as that employed for the ventilation, namely, the hot-blast system, as I think that heating and ventilation should be entirely independent. The direct radiator with preferably a hot-water heating system is the best system for warming, and the subject is being treated with this in mind.

By building a hospital on the solid rectangular plan or the variation from this on the U-shape, in which there are continuous corridors, the entire corridor can be taken as a ventilating duct. Ventilators are placed in the lower sash of the windows, and transoms are made over all the doors, swung in such a manner that there can be no draft. The fresh air comes in at the ventilators and goes out through the halls by way of the transom. Large openings are provided at the top or above the windows or doors at both ends of the corridor with a good radiator below, it being, of course, necessary as far as possible to put the radiators in the rooms under the windows having the ventilators. In this manner a gentle current of air will pass at all times from the rooms into the corridors and out through the ventilators.

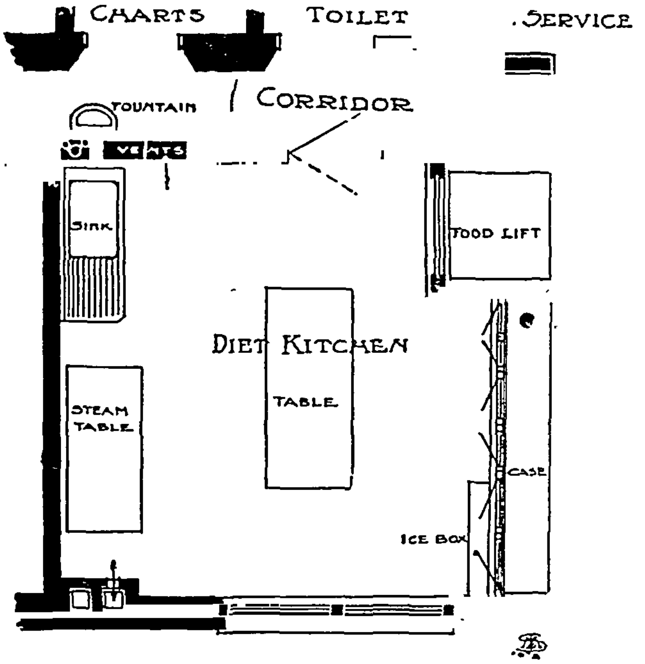

Fig. 9.—Plan of diet kitchen: table in center is built on pipe stands with dish racks over and tray-racks under the top. The case at the side is for dishes, linens, etc.

The bugaboo about drafts is gradually being dispelled, for a gentle draft of even partly temperate air is an indication that the air is being changed and will hurt no one. In extreme cases a light hood could be worn over the head of the patient to ward off any possibility of earache or neuralgia, if the patient were susceptible to these, but in most instances the bed is so placed that drafts come across the foot and not across the head of the bed.

When the air comes into the room and is heated it will naturally travel toward the ceiling, go out by the transom, and the vitiated air, being warmer than the air at the floor of the corridors, will naturally go along the ceiling. I have employed this means of ventilation in practically all hospitals of the size under discussion, and have never found it to fail; in fact, it has worked admirably in all such cases, and I consider it in the ordinary hospital to be as effective as any mechanical system that could be devised under present conditions. The economy of such a system is manifest.

In a system such as I have described an excellent auxiliary for the additional ventilation which would be required in toilet- and service-rooms and diet kitchens, and also in operating-rooms, is to have large ducts, running from the basement to a point above the roof, with heaters at the foot of each duct.

FLOORS

The much-discussed subject of floors and the oft-repeated question as to what is the best material for floors will ever arise, for whenever the supposedly ideal floor has apparently come to stay it is found to lack some requisite qualification. It has been said that "precedent bears no relation to the subject, apparently, for what is considered as ideal by one authority will be disparaged by another until there is a divergence of opinion that is both confusing and unfortunate."

There are so many so-called sanitary floors on the market to-day, each with its claim that it is the only floor which is sanitary, acidproof, waterproof, fireproof, even crackproof and all other proofs, that one hardly knows which of these floors is the real floor. Recently one or two companies have put floors on the market which, if they do not fulfill all requirements and all claims, at least have the backing and the guarantee of men who are financially responsible.

The subject of wainscoting has always been an open one, but recently there has come into the market a glass tile which is both made and treated in a mechanical manner; that is, put up without the unsightly spalled patches, and which is put on with cement consisting to some extent of litharge and other ingredients; thus it is practically impossible even to tear it from the wall without breaking it. This, in my estimation, would make the best of all wainscoting for operating-rooms, as it does not craze or crack as does the ordinary tile. It is non-absorbent and has a great advantage over such materials as soapstone and slate, in its perfectly white appearance. But so far as sanitary qualities are concerned, the hard plaster properly treated and well enameled fulfills every requirement.

Without going into detail, all floors should have coves at the walls.

ILLUMINATION

There is nothing in the hospital which has been left to chance so much as illumination. The subject includes the placing of plugs in the rooms for portable or reading-lamps, the former for the use of the doctor in examining the patient, and the latter for the convenience of the patient for reading-lights, fans and warming pads.

Illumination should be considered not from the point of view of what has been done, but from that of the actual conditions which exist, namely, the plan of the floor and the height of the ceiling, the purpose for which the various rooms are intended and the luminant or means of producing the light. The first of these depends entirely on the architect's plan, and the second is always a matter of arrangement. The third is one which is rather open. The different luminants, of course, are gas and electricity.

Globes for various purposes have been fully discussed, as also the methods of lighting different rooms, all of these being subject to exact calculation, and they should be so handled.

The ideal light for operating-rooms has thus far never been used to my knowledge, namely, the system of rarefied gas, electrified, in tubes of one form or another, so that a white light can be obtained that has a low relative intensity with an extremely brilliant illumination.

The Cooper-Hewitt light is the one with which we are most familiar, which has a mild and clear light of great magnitude and low intrinsic value, but is impossible for use in operating-rooms owing to the extremely bad color distortion to which red is subject under this light. This objection can not be waived.

The Moore continuous tube, which runs around the entire room and can be made ornamental as well as useful, has solved this problem of color distortion. From this tube can be obtained light either of pure white or sunlight color with varying degrees between.

Why it has not been used in hospital operating-rooms is a question which can not be answered here. This mode of lighting is new and operators as a rule prefer to stick to the old method of having the hot unsightly cluster of incandescent lamps over the table so that they can swing the fixture.

DECORATION

Decoration in relation to illumination is of very great importance. In a recent article W. J. Clark[2] states that in new buildings, in nearly all cases, the walls are of white alabaster finish, and for the first year no change is made as the owner usually wishes the walls to dry out before he puts on decorations.

In the second year the walls are painted or papered, and if the taste of the individual or those in charge runs to dark colors, especially dark reds or greens, colors which are lowest in reflecting properties and which absorb about all of the light thrown on them, the result is that where formerly one or two burners were sufficient to light the room satisfactorily, now three or four are required.

Complaint is made that the increase in the lighting bills is out of proportion, inasmuch as rooms are being occupied in the same manner that they were before and that the light is burning to no greater number of hours, and the fact that the entire trouble is due to the selection of the colors is entirely overlooked. This oversight is the more curious since everybody knows and understands the bright, cheerful effect of light colors. The desired effect can be obtained by using soft stippled colors or soft tones, with a slight stenciled decorated border, or a change of color between the walls and ceiling, or the thousand and one methods of obtaining artistic effects without in the least sacrificing any of the light.

In rooms where there are eye patients the walls and ceilings should be of neutral tints, and the illumination should be carefully considered with a view of having, if possible, no direct light at any time which would fall from the source of light to the eye of the patient.

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2. How Color of Walls Affects the Cost of Lighting, The Illuminating Engineer, iii, No. 3.

I have found that in corridors as well as in rooms a uniform scheme of decoration can be easily followed by making the lower floors of a very light shade of color in the rooms, say green, in its various shades, and darkening these colors by a shade or two in the higher stories, making a progressive color scheme. Since most of the daylight would be in the upper stories, even under this condition, these upper stories should be extremely light in color without having a glare.

The corridors could best be treated for the lighting effect in the very light tans or chromes.

REFRIGERATION

In smaller institutions, especially those having about 150 beds, mechanical refrigeration can be installed so that the main refrigerators and the small diet-kitchen boxes could be run from such a plant and sufficient ice for ordinary purposes could be made.

There are small plants now made which are very economical and which fulfill every requirement at a cost about equal to that for icing a number of boxes and with much less inconvenience and considerably less dirt and disturbance.

The brine system is the only one which can be practically used in boxes as widely distributed as they are in a hospital. Ammonia expansion is not particularly adapted to places where it is liable to do the harm that a leak in a pipe would cause in a hospital. The brine system should be installed in such a manner so that it would be necessary to operate the machine for cooling the brine from six to eight hours only, with a small auxiliary pump to keep up the circulation when the main pump was not working.

EQUIPMENT IN CONSTRUCTION

I need not dwell on the vacuum cleaning systems and the general equipment of kitchen, laundry, sterilizing-room and morgues. The general equipment of the toilet and bathrooms and of the service-rooms for the nurses have been mentioned. In reference to special equipment, attention is directed to the necessity for bed-pan sterilizers and specially constructed bed-pan racks in all service-rooms on each floor.

In the main kitchen there should be a large steam table, and in the diet kitchens smaller steam tables with combination gas stove so that food may be served at all times hot and palpatable.

The equipment of diet kitchens varies so that no definite details can be given, but an arrangement of plan and equipment that has been used considerably and has been very successful is to place the equipment on one wall and a long table in the center of the room for the make-up of the trays. This table has racks underneath so that trays can be made up ready for the food at convenient times.

The ordinary sterilizing apparatus for the sterilizing-room is familiar to all, but the arrangement can be obtained by having the preparation table and sink and the sterilizers with the small supply-room to which the house nurses go to get their supplies, without the necessity of going through the operating-rooms or into the sterilizing-rooms.

The pathologic laboratory should not be left to chance; that is, provision should not be made for every thing else and the laboratory put in the space left, if any. The laboratory is one of the most important features of well-planned and properly-conducted hospitals.

In the general arrangement of the hospital provision should be made that the matron and superintendent should have each a private suite of bedroom, office and bathroom. There should also be provided trunkrooms and storerooms, the latter for the storing of quantities of supplies to get the advantage of price.

The matter of linen-rooms, chartrooms and space for carts should also be given consideration.

84 La Salle Street.

AN EPIDEMIC OF ACUTE ANTERIOR POLIOMYELITIS

OCCURRING IN SALEM, VA., AND VICINITY

R. MINOR WILEY M.D., and J. C. DARDEN, M.D.
SALEM, VA.

During the past summer there occurred in Salem, Va., and the adjacent country a small epidemic of anterior poliomyelitis. The first case developed June 2 and the last one reported to the Board of Health was August 10. Some time previous to this outbreak the weather had been intensely hot, while the prevailing humidity was high. After several cases had developed they were reported to the State Commissioner of Health, and he was asked if the disease was prevalent elsewhere in the state. Singularly enough, he reported that it was not reported from any other locality. Just why this town and the adjacent territory were visited by this epidemic we are entirely unable to explain, as the authorities do not class this as a contagious disease, and, so far as we are aware, there were no local conditions which might have produced this epidemic, outside of the intense heat and high humidity, which, however, obtained generally in this section of the state. Neither did this epidemic follow in the wake of an epidemic of any acute infectious disease, as is sometimes the case. There were twenty-five cases in Salem and the adjacent country, a strikingly large number; whereas Roanoke, a city of about 35,000 inhabitants, seven miles east of Salem, connected by a trolley line, and daily visited by scores of Salem people, escaped, as we are informed by the Roanoke health officer, with only a single case, occurring in September, quite a while after the development of the last one of our cases.

The reports in some of these cases are not so full and complete in detail as we would desire, because in some cases the attending physicians did not record notes and, therefore, were able only to recall the main points in each one. The main purpose of our paper is to call attention to the occurrence of such a large number of cases of this disease, practically amounting to an epidemic, which, so far as we know, is without precedent in this section of Virginia.

Authorities are not agreed whether the disease is of microbic or toxic origin, although in our opinion it is due to a specific organism. We regret our inability to shed any new light on the obscure points in this disease, either as regards etiology, pathology or treatment, but we hope by this report to evoke an interest in, and a discussion of, this subject.

REPORT OF CASES

REPORTED BY DR. J. P. KILLIAN, SALEM, VA.

Case 1.—The patient, male, was aged 3; family history good. The physician was called June 19, 1908. The patient was prostrated; the pulse was rapid, the temperatue 103, the left arm partially paralyzed and the left leg entirely so. This condition continued for about ten days; then the patient began to improve slowly, and in three weeks was able to walk by dragging the leg, and now, after nine weeks, is able to walk very well.

Case 2.—The patient, a boy, aged 3½ years, was first visited June 27, 1908. His temperature was 104. He had a severe headache and rapid pulse; his left leg was completely paralyzed. Within a few days the fever disappeared and the patient began to improve. Now, at the end of nine weeks, the patient can walk across the room.

Case 3.—The patient, a boy, aged 3 years, had partial paralysis of the right arm and the right leg. The patient has made perfect recovery in eight weeks.

Case 4.—The patient, a girl, aged 2 years, had partial paralysis of the left leg and the left arm. This was a mild case, with apparent complete recovery.

Case 5.—The patient was a girl, aged 14 months. The physician was called August 16. The patient's temperature was 101, pulse 120, with complete paralysis of all the limbs. This case had a fatal termination on the tenth day, as the result of the involvement of the respiratory center, which became manifest on the sixth day of the disease.

REPORTED BY DR. J. L. STEARNES, SALEM, VA.

Case 6.—The patient was a girl, aged 18 months. The physician's first visit was June 2, 1908. The child had paralysis of the left leg and retention of urine, and evinced great pain when moved. The temperature was 103. On August 24 the patient showed gradual improvement, as she could move her leg, though she was not able to walk.

Case 7.—The patient, a girl, aged 2 years, was unable to walk or stand alone at the physician's first visit, and suffered pain when moved. The temperature was 102, and there was difficult urination. This was a case of partial paralysis of both legs, with full recovery.

Case 8.—The patient was a boy, aged 18 months. This was a case without special interest, in which both legs were paralyzed. One leg has regained its function, but the other remains almost entirely paralyzed.

REPORTED BY DR. SAMUEL M. TERRILL

Case 9.—The patient, a boy, aged 4 years, was first visited July 13, 1908. He then had pain in his head, nausea, profuse sweating and mild fever. Next day his temperature was 104, and he had pain in his head, back and limbs. On July 15 his temperature was 105, with continuance of severe pains in his head, back and limbs. The child was slightly delirious. On this day it was first discovered that all the limbs were partially paralyzed, and there was a complete right-sided facial paralysis. The fever and pain subsided in a few days, and in ten days from the onset of the disease there began a gradual recovery from the paralysis of the limbs, which at this time has completely disappeared, though the facial paralysis still exists to a noticeable degree.

REPORTED BY DR. S. I. CUNDIFF, HOLLINS, VA.

Case 10.—The patient, a girl, aged 2½ years, white, had had none of the infectious diseases, and prior to this attack had been perfectly healthy. Her temperaure was 103; there was vomiting, general malaise, and profuse sweating. On the second day diarrhea developed, lasting three days. The child was extremely sensitive to touch or any movement of the body, and preferred to lie quietly in bed. On the fourth day paralysis of both legs developed. The temperature returned to normal on the seventh day. The child had retention of the urine beginning with paralysis and lasting four or five days. The acute symptoms lasted ten days, since which time there has been a gradual improvement.

Case 11.—The patient was a boy, colored, aged 3, with a previous history of uniform good health. The attack was ushered in by headache; the temperature was 102; there was vomiting, pain in the head, back and limbs, with a decided objection to being moved. On the fifth day the patient developed a paralysis of both legs; one eye and corresponding side of face were also affected. The paralysis of the legs has improved to the extent that the boy can walk, but with a staggering gait, which, however, is greatly lessening. The paralysis of the rectus externus, however, shows no improvement.

REPORTED BY DR. J. C. DARDEN, SALEM, VA.

Case 12.—The physician was called July 1 to see a boy, aged 3½ years, who had been complaining for three or four days. The patient was suffering from pain in the spine, head and limbs, and the skin was sensitive to the touch. The temperature was 102. The child had no desire to eat and had vomited a few times. There was profuse sweating. A slight limping was discovered in the right leg. Two days later the right leg was completely paralyzed and the left leg slightly involved. Further than this the paralysis did not extend. Within two weeks the child began to move the toes of his right foot, and since that time there has been a slight but gradual return of the use of the paralyzed muscles. The patient is at the present time able to walk unaided, though there is some drag of the right foot.

Case 13.—On August 6 the physician was first called to see a girl aged 16 months, white. The parents said that the child had been feverish and fretful for three days, and the day previous to calling me they had noticed that she could not walk as well as usual. The temperature was 101, the tongue coated and the bowels constipated. There was considerable sweating. The child cried when touched, and objected to being turned over in bed. The left leg and thigh were completely paralyzed. Within a week the fever subsided, and twelve days from the onset of the disease the child was able to flex her toes. During the succeeding week she could move her leg. At the present time she can walk by the aid of her mother's hand, but the affected muscles are very weak and considerably atrophied.

REPORTED BY DR. R. M. WILEY, SALEM, VA.

Case 14.—The patient was a boy, aged 3. The physician was first summoned on June 26, 1908, because the child had been complaining a few days before, and could not now walk. Complete paralysis of the left leg was present at this time; the temperature was normal, though the patient had no doubt had fever previously. The child had pronounced hyperesthesia when moved, and begged not to be disturbed. When lifted, his head would fall back, showing a loss of power in neck muscles. In course of two and one-half weeks he began to show improvement; could move his leg and hold it up. He suffered a relapse July 26, and again the leg was paralyzed. In the course of a week he regained use of leg and on August 10 he had been walking, but with a decided limp.

Case 15.—The patient, a boy, colored, aged 4, was first visited July 4, 1908. The child had then been sick a day or so. He complained of headache, backache and pain in the limbs; had vomiting and moderate fever. Paralysis of one leg developed on July 7, and the next day the other leg was paralyzed, and the day following both arms were paralyzed. Fever of a high type continued, and the respiration and heart action both became irregular. Both sides of the face and the muscles of both eyes were also paralyzed, showing that the inflammatory process in the cord had extended to the medulla oblongata. In fact, paralysis was so complete that the child could not move either leg or even turn his head or rotate his eyes. Sphincter control was entirely lost.

This patient also showed a characteristic symptom, profuse sweating. In about two weeks from the onset of the disease the breathing improved in character and the child was able to slightly flex his fingers and toes. The prospects for recovery appeared good, but within another week the respiration became more involved, and child died from respiratory failure after surviving four weeks. This case serves as an exception to the statement of Starr, that the prognosis is favorable if the child survives as long as ten days from the onset of paralysis.

Case 16.—The patient was a girl, aged 3, white. This case proved rapidly fatal; the physician's first visit was on July 17 and the child died on July 19. At the first visit the child had moderate fever, complained of headache, and evinced pain upon being moved. A paralysis of one leg was then evident, and on the second day there was a complete paralysis of all the limbs; respiration was much embarrassed, being irregular and rapid; the heart action was also irregular and rapid.

The child's expression was one of extreme terror. She died on the third day of cardiac and respiratory paralysis. There was in this case a paralysis of the muscles of deglutition as well as of the muscles of the face and eyes.

CASE 17.—The patient was a boy, aged 6, white. This was a very slow case in development; the child had been sick for six days, complaining of general malaise, with a moderate fever, before any signs of paralysis appeared, which was on the sixth day. This consisted of a partial paralysis of one leg. This case was so insidious in its development that the diagnosis of the consultant and myself was typhoid fever. This proved to be a mild case, with complete recovery.

CASE 18.—The patient, a boy, aged 3, white, had experienced none of the infectious diseases of childhoood. When first visited, the patient showed moderate fever and complained of general aching. Paralysis of one leg was discovered on the third day. Beyond this the trouble did not extend. A gradual improvement began in two and one-half weeks from the onset, and in a few days the child was able to walk, but even at the present time there is a decided dragging of the affected leg.

REPORTED BY DR. E. W. DAVIS, SALEM, VA.

CASE 19.—The patient was a boy, aged 3, white. This case presented no points of special interest. Both legs were completely paralyzed. The child has recovered from the paralysis with the exception of a slight dragging of the left foot.

CASE 20.—The patient, a boy, aged 3½, colored, affected with partial paralysis of the left leg and right arm, recovered completely.

REPORTED BY DR. W. P. NORRIS, SALEM, VA.

CASE 21.—The patient, a boy, aged 4, colored, had had roseola, but no history of other disease. When first seen he was constipated and languid; his temperature was 102, his tongue white-coated, and his pulse about 110. On the third day paralysis of left arm and leg developed. Recovery is now nearly complete.

CASE 22.—The patient, a boy, aged 13 months, white, was vomiting, had two or three degrees of fever and very restless when the physician was called. The child seemed to improve after first visit, until the fourth day, when paralysis of the right leg came on. Recovery was almost complete in two weeks; is now complete. The patient had had no previous disease.

CASE 23.—The patient, a boy, aged 3, colored, with negative history, when first seen was paralyzed in the left arm. He could not swallow well for two or three days. Recovery ensued in ten days

CASE 24.—The patient, a girl, aged 2, white, had no history of previous disease. She vomited, was restless, and had high fever. Her bowels were very loose for sevetal days. Fever continued until the fourth day, when paralysis was first noticed, which affected the left arm and leg. No improvement was noticed for six weeks. The child is now much better, but is not completely recovered, and in all probability will never be. It is feared that the leg will never be normal, as there is now indication of atrophy.

CASE 25.—The patient, a girl aged 15 months, white, had a partial paralysis of the right leg. There was complete recovery in three weeks.

ANALYSIS OF CASE REPORTS

An analysis of these cases shows the following points of interest: The disease was confined to children under 5 years of age, except in one case, a boy of six. The youngest patient was 13 months old. There were 7 cases in which one leg was involved, 1 case in which one arm only was affected, 5 cases in which one arm and one leg were paralyzed, 1 case in which one arm and the leg of the opposite side were affected, 6 cases in which both legs were involved, 4 cases in which all the limbs were paralyzed, 5 cases showing bulbar paralysis, and 3 deaths, which shows a mortality of 12 per cent., higher than is commonly attributed to epidemic infantile paralysis, the authorities stating it to be 6 or 7 per cent. In the sporadic form of this disease fatal termination is said to be a rare occurrence. In all the fatal cases there was respiratory and cardiac paralysis. A feature in many of these cases worthy of note, because it misleads many of the laity, and possibly some of the profession, who have not had experience with this disease, is the extension of the head, which is due to a paralysis of the neck muscles, in contradistinction to the rigid retraction of the head in meningitis. There were 8 cases of complete recovery, and 14 of incomplete recovery. Each of these incompletely recovered patients has shown some improvement, and it is possible that some of them may yet ultimately recover, as it is stated by M. Allen Starr that "as a rule such improvement is likely to go on for two years." A striking feature in a majority of these cases was pronounced hyperesthesia. Another was profuse sweating. The fact that not more than one case occurred in any house, although in many instances there were other children in the family who associated with the affected child, would seem to prove that the disease is not contagious. Following a decided drop in the temperature of the weather, which occurred in the latter part of July, no new cases developed for three weeks, until a return of the hot wave, which occurred early in August, when two additional cases developed on August 6 and 10, respectively, thus apparently sustaining the belief that hot weather is in some way essential to the development of this disease.

TREATMENT

In regard to the treatment, we regret that our colleagues failed to make any report. We ourselves administered salicylates and applied counter-irritation, either in the form of mustard plasters or of tincture of iodin to the spine during the acute stage. The subsequent treatment consisted of ascending doses of potassium iodid to promote absorption in the inflammatory area in the cord, and strychnin in increasing doses to the point of toleration for its tonic effect. We also employed massage, warm baths, and whenever practicable the galvanic and faradic current. None of these patients have as yet developed deformities, consequently we have nothing to report in the way of orthopedic treatment, although we are well aware of the great importance of orthopedic apparatus and of nerve and tendon transplantation in the later treatment of these cases.

MECHANICAL (DYNAMIC) OBSTRUCTION OF THE BOWEL *

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It is not the purpose of this paper even to touch on all of the various phases of intestinal obstruction, but merely to call attention to a few features of this interesting affection. The first is the abuse of purgatives in this condition. Every surgeon has seen deaths caused by the injudicious use of purgatives. There are few things that require more judgment or skill than the correct exhibition of a suitable purgative at the proper time. Certainly in acute infectious diseases or in any case in which a toxemia is primarily present, a purgative is not only advisable, but absolutely necessary It is dif-

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ferent, however, with acute obstruction from any other cause than that which has just been mentioned. A sudden obstruction, not due to nervous affections, always means one of two things: either an inflammatory condition of the peritoneum or else some form of mechanical obstruction, as bands, strangulated hernia, intussusception, volvulus, stricture, or tumor.

When an inflammatory condition is present, purgatives are contraindicated. The great principle of rest is applicable in every form of therapeutics, whether medical or surgical, and inflammation of the outer coat of the intestines is no exception to the rule. This principle is recognized so universally in other instances that it should be superfluous to call attention to it here. A fissure of the anus is best cured by temporarily paralyzing the sphincter, so giving the fissure rest, when it will promptly heal. The object of using splints for broken bones and retentive apparatus in injury of any portion of the body is solely to secure rest for the injured part. In order to give rest we must first find the function of the organ involved and attempt to suspend this function, either completely or partially. Affections of the eye, for instance, would not be benefited by rest in bed, unless light was cut off and the patient prevented from seeing, nor would a darkened room help the patient with a broken leg unless the bones were properly set and retained in a position of rest.

One of the chief functions of the intestines is to propel the food it contains, and this is accomplished by peristalsis. In the inflamed bowel we should apply the principle of rest by restricting this function as much as possible, so we should attempt to inhibit peristalsis rather than accelerate it. If we give purgatives in such conditions, whether the inflammation is due to appendicitis or to whatever cause, we not only tend to spread the infection, but we fly in the face of the practice we follow when other organs are affected, and instead of lessening the function of the bowel and so giving rest and an opportunity to recuperate we make matters worse by increasing peristalsis with the purgative.

There are some instances in which a purgative apparently does good in inflamed conditions of the peritoneum, because the toxemia from the infection is so great that the purgative causes elimination of the toxins and benefits the patient in a constitutional way, while really making the local condition worse. If such patients were given an abundance of water, and if enemas were used, which empty the lower bowel with a minimum amount of peristalsis, a sufficiently beneficial effect could be obtained in an eliminative way with but a small increase of peristalsis, while at the same time more work would be thrown on those great eliminative organs, the kidneys, by means of the copious supply of water. In this way the excretive function of the bowel would be partially suspended and the rest necessary to repair would be obtained.

When the acute obstruction is due to some mechanical cause, the contraindication for a purgative is even plainer. All purgatives act either by promoting peristalsis in some way or by stimulating the secretion of the intestines. As a matter of fact, while some purgatives act more decidedly in one of these two manners, they all tend to increase peristalsis either directly or indirectly. The more vigorous the purgative in mechanical obstruction the more absolute the obstruction will be. Just as pulling on a string increases the security of the knot, so purgatives by stimulating peristalsis will make the obstruction from any mechanical cause more complete, whether it be due to volvulus, bands or stricture. Besides this deleterious effect, the increased secretion within the bowel, caused by the purgative, augments the normal contents of the alimentary canal and causes greater distention, which rapidly adds to the seriousness of the condition. Food of any kind in the stomach aggravates the obstruction by giving the bowel more work, thereby stimulating it to greater activity.

The other point to be considered is the surgical method of dealing with the obstruction. The earlier surgical interference is attempted after reasonable efforts have been made with enemas to produce an evacuation, the better for the patient, as the mortality rate increases with each hour's delay. When distention after an obstruction is very marked, frequently an enterostomy is indicated for drainage to carry off the dangerous toxins that have formed. Whether this should be done depends on the findings during the operation, and must necessarily be left to the judgment of the surgeon. When resection is attempted, the method by which the bowel is united is of great importance. A fixed metallic body, with a small lumen for drainage, such as the Murphy button, which by its weight may cause a kinking or volvulus of the portion of intestine in which it has been inserted, is hardly the logical thing to use in such conditions. Intestinal sutures, carefully placed by one who has acquired skill in this line either by clinical or by experimental experience, are much safer and can be inserted in but little longer time than it takes to insert the Murphy button. Of course, when the bowel can not be delivered into the wound and sutures can not be accurately placed, the Murphy button may be indicated: but, judging from my experience, such conditions are quite uncommon.

Since the opening of Memorial Hospital, July 27, 1903, about five years ago, I have done eleven resections of the bowel. These cases will be reported more fully in a subsequent paper, but I will here give a brief summary of them. Of the eleven cases, two were of such a nature that union could not be later accomplished.

In one instance, resection of a large, malignant tumor of the cecum was done, and an artificial anus was made. The patient left the hospital, but soon developed metastasis in the liver, from which he eventually died. There was no time at which a subsequent operation would have been justifiable.

In the other case, which is reported below, the involvement of the rectum by gangrene made union here impossible, so a permanent artificial anus was established.

Of the other nine cases, in one, resection involved the upper rectum, was deep in the pelvis, and on account of the adhesions and raw surface left after removing very adherent pus tubes, suturing was apparently contraindicated. The patient made a satisfactory recovery.

Another patient was a feeble man whose intestine was gangrenous from a strangulated hernia. In order to make assurance doubly sure, a Murphy button was used and sutures were inserted over this. This was one of my early cases, and I believe I made a mistake in using the button, as events subsequently proved, for the patient developed a large fecal fistula evidently due to the presence of the button. The fistula closed rather suddenly two months later.

In seven cases union was effected solely by suturing. Of these patients six recovered uneventfully. One patient died the third day after the operation. He had a strangulated hernia and two different loops of intestines were involved, which made a double resection necessary. The patient was a chronic alcoholic, and considerable chloroform had been administered to him for some time before he came under my care in order to reduce the hernia. A postmortem was held by Dr. E. G. Williams, pathologist to the hospital, and showed a hobnailed liver and other evidences of chronic alcoholism. Both resections were intact, and there was no sign of leakage from either of them, nor was there any indication of peritoneal inflammation. The small bowel contained a few ounces of blood, but hardly enough to affect materially the fatal issue, which was, in all probability, due to the suspension of the functions of the liver and kidneys following the large amount of anesthetic necessary in a man who had been a heavy drinker for many years. Certainly this death can not be attributed to any technical defect in the operation. In none of the cases in which suturing alone was used was there a fecal fistula or subsequent trouble in any way attributable to the resection. The clean and uneventful recovery of these cases so far as the resection is concerned contrasts strongly with the stormy convalescence sometimes seen after a Murphy button has been used, when the formation of fecal fistulas and anxiety about the passage of the button, which may require a subsequent operation for its removal, often afford an occasion for considerable apprehension.

The two cases reported below occurred within three weeks of each other and are selected to illustrate two types of mechanical obstruction in adults.

CASE 1.—Intestinal obstruction from a band. Enterostomy, followed by resection of the bowel and union by suturing.

Patient.—D. T., female, aged 21, colored servant. Admitted to Memorial Hospital, Aug. 2, 1908. Discharged Sept. 9, 1908. Referred by Dr. Angus Nichols, of Richmond, Va. Family history and personal history of no significance.

Present Illness.—Three months ago the patient complained of severe pain in the right side of the abdomen, which was accompanied by vomiting. Three days after this the patient was operated on in Norfolk, but it is impossible to learn the nature of the operation except that drainage was used. She left the hospital after one month and was apparently well until Friday, July 31, when she suffered severe pain in her abdomen, particularly in the right side, with diffuse tenderness and persistent vomiting. On the following Sunday she was referred to me and admitted to Memorial Hospital. After her stomach had been washed out and the administration of everything by mouth discontinued she seemed much better. Soapsud enemas were ordered and a small bowel movement obtained. On the next day, August 3, the patient was considerably worse, with a pulse of 120 and the abdomen becoming much distended. An operation was decided on at once.

Operation.—Under ether anesthesia an incision just to the right of the old median scar was made. A considerable quantity of blood-stained serum was found in the peritoneal cavity. The small intestine was distended and congested. At a point eight inches from the cecum a firm band crossed the ileum and completely occluded its lumen. The band ran from the right iliac fossa to the root of the mesentery. The intestine below this point was collapsed. The band was divided and the bowel underneath it was found to be partly gangrenous; the mesentery for several inches above this point was infiltrated and thrombotic. The patient's condition was becoming rapidly worse, her pulse being 180, and very weak. On this account and because drainage of the distended bowel seemed indicated, an enterostomy was done. The affected loop of intestine was drawn into the wound, sutured to the skin, and surrounded by iodoform gauze. It was then incised and a large rubber tube inserted in the proximal end. She left the table with a weak pulse of 180.

Postoperative Treatment.—The patient was put in the Fowler position with continuous rectal saline infusion and hypodermoclysis of saline solution. This is, practically, the treatment recommended by Murphy and has proved most efficient, not only in curing peritonitis, but in preventing it. Under this treatment she rapidly improved, and on the following day, August 4, her pulse was 110 and of good volume and there was a profuse discharge of fecal matter through the enterostomy. Her improvement was continuous, and on August 15, twelve days after the enterostomy, she was operated on with a view to re-establishing the continuity of the intestine. For several days before this second operation the patient was given sterile food and careful mouth toilet was done every few hours.

Second Operation.—Under ether, an elliptical incision was made, including the enterostomy, the old scar, and the adjacent skin. The bowel opening had been covered with moist gauze to prevent infection from this source. When the peritoneal cavity was entered very dense adhesions were found around the intestines. They were separated and two clamps were placed on the intestine, one above and another below the enterostomy. All of the bowel between these points, including the enterostomy opening and its adjacent skin, was excised in one mass, the surrounding intestines and peritoneal cavity having been carefully protected with moist gauze. The ends of the bowel were then united by a continuous right-angled suture of linen penetrating all coats. A few reinforcing sutures were placed at the mesenteric border, as the infiltrated mesentery made approximation at this point more difficult than usual. Several inches above the line of union a tear was discovered which had probably occurred during separation of adhesions when the abdomen was first opened. This was closed by a right-angled continuous suture, reinforced by mattress sutures to relieve tension. The appendix was congested and very much enlarged. It was removed, being tied off at its base by a kangaroo tendon which included both the mesentery and the appendix. The stump was disinfected with pure carbolic. The patient's condition had become gradually worse until it was quite desperate. Her pulse was 190 and respirations exceedingly bad, necessitating the use of oxygen and at one time artificial respiration. The abdominal incision was rapidly closed with through-and-through silkworm-gut and a large drainage tube was left in the lower angle of the wound.

Postoperative History.—The patient was put to bed with continuous rectal saline injection and hypodermoclysis of saline solution, and as soon as she had reacted sufficiently was placed in the Fowler position. Under this treatment her pulse gradually came down until by the next day it was less than 120. She made an uninterrupted recovery from this time on, except that she suffered a great deal of pain for the first ten days after the operation. This was to be expected from the large amount of raw surface necessarily left after this operation. At the end of two weeks the pain had practically disappeared. On September 9 she was discharged from the hospital after being up for several days previously. There was a small raw surface about an inch in diameter at the lower corner of the wound where the drainage tube had been inserted. There was practically no discharge from this, as there had been but little from the tube at any time. The patient was comfortable and feeling well and her bowels were moving regularly.

CASE 2.—Volvulus of the sigmoid; gangrene of the sigmoid, rectum and descending colon. Resection of the gangrenous bowel and colostomy.

Patient.—S. F., male, aged about 40, colored. Admitted to Memorial Hospital Aug. 17, 1908; discharged September 11. The patient was a deaf-mute and it was impossible to secure a satisfactory history, but he had evidently suffered from this condition for several days and had not been relieved by purgatives.

Present Illness.—The abdomen was enormously distended and coils of intestine could be distinctly outlined. The patient's pulse was weak and about 140 to 150.

Operation.—The patient's condition was so desperate that an operation under general anesthesia could not be considered. Consequently, cocain was used. I thought that the obstruction was in the sigmoid and probably due to cancer, so an incision was made over the cecum with the idea of making an artificial anus and doing a radical operation for cancer of the sigmoid later on; an artificial anus in the region of the sigmoid would have made a subsequent radical operation in this region much more difficult. After opening the peritoneum a considerable amount of brownish fluid was evacuated. Toward the median line a large cystic mass was felt. Another incision was made in the median line and disclosed an enormously dilated, slate-colored sigmoid which was at first difficult to identify. The gas it contained was evacuated by a trocar and canula and the intestine drawn into the wound. It was found to be a volvulus of the sigmoid which had turned through 180 degrees. The whole of the sigmoid, the upper part of the rectum, and the descending colon were gangrenous. Along the mesenteric border of the affected intestine were numerous black thrombotic areas. Healthy bowel was found about the splenic flexure of the colon, which was pulled down and the intestine divided at this point. The proximal end was temporarily clamped and all of the gangrenous intestine excised, after ligating the mesentery in sections, down to the rectum. The rectum was gangrenous as far as it could be inspected, and it was not thought proper to leave the rectal stump free in the pelvis, so the intestine was amputated through the affected area and the lower portion, which consisted of the upper part of the gangrenous rectum, was sewed in the lower angle of the wound. A tube was inserted in this stump and was packed around with iodoform gauze. The rest of the wound was approximated with sutures except at the upper angle, where the clamped end of the colon was brought down and sewed to the skin. The end of this bowel was drawn snugly around a tube with a purse-string suture. A large drainage tube was put in the primary opening over the cecum to drain the peritoneal cavity and a liberal amount of gauze surrounded the openings of the intestines in the median line to prevent infection of the wound.

Postoperative History.—The patient stood the operation very well. He was put to bed and the head of the bed elevated about two feet. He was given salt solution by hypodermoclysis. There was an abundant fecal discharge within a few hours. By the next day the patient had improved markedly, though there was some difficulty in respiration, and on September 19, two days after the operation, his pulse was only 100 and of good volume, with a temperature of 100. He made an uninterrupted recovery from this time on. The part of the rectum that was sutured in the wound gradually sloughed away. The patient was up and walking about three weeks after the operation and was discharged in good condition on Sept. 11, 1908, twenty-five days after admission to the hospital. On account of the affection of the rectum and the amount of sigmoid and colon removed it will be impossible to restore the continuity of the intestine and the artificial anus will be permanent.

303 West Grace Street.

THEORETICAL AND PRACTICAL CONSIDERATIONS CONCERNING THE SIGNIFICANCE OF THE CONJUNCTIVAL REACTION (OCULAR TUBERCULIN TEST)*

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The new tuberculin reactions have opened up a wide field in connection with both theory and practice and have revived the discussion of many questions that had come to a standstill. I do not regard it as my task now to take up all of the theoretical questions; the lack of space would preclude this. I shall occasionally refer to the papers in which those interested may find further data that may interest them. I believe it would be best to pick out a few practical questions and try to come to a conclusion concerning them.

Recently a number of new tuberculin reactions have been placed at our disposal for the diagnosis of tuberculosis. A large amount of literature has followed the first publication about these matters, a great part of which is worthless because of an insufficient knowledge of the fundamental basis of the reactions on the part of the observers. A recital of such examples is not in place. Such publications have caused confusion and dispute, a fact which has made the practitioner avoid this field of contest. But the time of toil and trouble will pass. It was the unavoidable result of an unsubstantiated approval of methods, from which I kept aloof, as is shown in my first communication on the subject.

We have now first the old subcutaneous method of Koch; second, the *Stichreaction,* just as old, but newly applied; third, the cutaneous and the conjunctival reaction; fourth, a series of so-called "new" reactions which I will not discuss.

The subcutaneous reaction is a specific one; it is a very sensitive test. A positive result indicates the presence of tuberculosis, but does not demonstrate necessarily an active or clinically evident tuberculosis. The occurrence of a positive reaction in 50 to 80 per cent. of clinically healthy individuals tested by the subcutaneous method should guard against such an error. I would not mention such a self-evident fact before this assemblage were it not that such errors are made daily in practice and being stated in literature. (Cf. Röpke and others.)

On the whole, the cutaneous and the *Stichreaction* give the same results as the subcutaneous method, which fact establishes their importance for clinical purposes. They are simple, safe methods which can be substituted for the subcutaneous method, demonstrating the same facts. They demonstrate a tuberculous focus, which, however, may be inactive or latent.

The conjunctival reaction differs materially from the cutaneous and the *Stichreaction,* being a reaction on a mucous membrane. It is positive in active tuberculous processes which are not too far advanced, and does not react in those cases in which a clinical examination is negative. It has already been shown that some of the apparently healthy people who gave the reaction had active tuberculosis. The future will tell whether or not tuberculosis is present in the remaining 5 to 8 per cent. But we can say to-day that, in contradistinction to the other tuberculin reactions, the conjunctival reaction is the one which indicates an active tuberculosis. An apparently healthy individual showing a positive conjunctival reaction is to be regarded in a suspicious light as being afflicted with an active tuberculosis.

These facts are proved by the records of reaction in 4,000 cases obtained under all precautions. The diagnostic value can be found only in the positive reaction. I have never stated that the negative conjunctival reaction excluded the presence of active tuberculosis, but it is improbable, except in cases in which clinically an active tuberculosis is present. For this reason the conjunctival reaction has a greater diagnostic value than the subcutaneous reaction. At first we considered them of equal value, but comparative examinations in about 100 cases have convinced us of the greater clinical value of the conjunctival reaction.

The inherent difference between the tuberculin local reaction and the subcutaneous method lies in *the pro-*

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*Read by invitation at the meeting of the New York Pathological Society, Oc . 14, [illegible]08.

duction of a typical tuberculin reaction far from the seat of the existing disease, that is, the avoidance of the lighting up of a fresh process at the seat of the original lesion. The rise of temperature in the subcutaneous method is not the element of danger, but the starting up of activity at the seat of the old lesion is the serious consequence, a process the progress of which can not be limited. In the recognition of this specific advantage of the conjunctival reaction the contraindications become evident; to these I have adhered from the beginning, having neglected them only once, in consequence of an error. In a paper read before the Berlin Ophthalmological Society, Jan. 7, 1908, I stated the contraindications. This was before the time when unfortunate experiences proved the correctness of my theoretical deductions. The prevention of reaction in the primary focus of the disease is the cardinal point.

Therefore, the conjunctival reaction is contraindicated if the eyes are or have been the seat of tuberculous diseases, or even if there is a suspicion of the existence of such lesions in the eye. Again, the application of the conjunctival reaction in an eye which has reacted is inadmissible and useless, because it would bring about a reaction at what is practically a tuberculous focus. This would not have any diagnostic value. It would act just like a cutaneous reaction, indicating a process which may have been latent. Another contraindication lies against the use of too concentrated preparations, especially the so-called "test" preparations. Their harmfulness especially appears when, as sometimes occurs, the conjunctival reaction is contraindicated for one of the reasons given above.

I recommend for use for the conjunctival reaction the "Ruete-Enoch tuberculin* for ophthalmo-reaction" in 1 to 2 per cent. solution, the efficacy and safety of which I have tested; as to its activity I can vouch. With more concentrated solutions better statistics can be obtained, because in persons with active tuberculosis a higher percentage of positive results will be produced. But I consider such statistics valueless, because they enforce a reaction in cases which are clinically evident.

In cases of tuberculosis in the early stages the reaction used according to my directions gives such distinct signs that no reason exists to vary my form of using the reaction, so often proved to be absolutely harmless. (A negative result of conjunctival reaction, in using the solutions I suggest, gives important prognostic evidence which is not to be obtained by the use of other concentrations.)

I admit freely that ophthalmologists are competent to judge the value of the conjunctival reaction, but they must recognize the above-mentioned contraindications and must get their experience from general medical cases. I am sorry to say that the ophthalmologists have hardly ever studied the contraindications, in consequence of which the conjunctival reaction will become prominent only after overcoming many prejudices founded on ophthalmologic publications.[1] It is not a mere coincidence that the ophthalmic clinic of Silex obtained very favorable results by using the method exactly according to my directions (tests made by Erlanger).

I have already said that the conjunctival reaction can be employed in diagnosis in internal medicine. But you will hear occasionally that the reaction is uncertain because it may be negative in tuberculous patients and positive in clinically healthy persons. This only confirms my statement and shows the clinical inexperience of the observer, because he does not appreciate that these negative reactions may be found in consumptives and that healthy people who give positive conjunctival reactions should be regarded with ten times as much suspicion as those who react positively to a subcutaneous injection of tuberculin. And you know that many clinicians consider even such a subcutaneous reaction as quite important from a diagnostic standpoint.

Mistakes are also made concerning my opinion that there is a prognostic value to the reaction. Nevertheless, I can state that this opinion, so seriously opposed, is coming slowly but surely to the front. Therefore, I am anxious to correct mistakes in literature. I declared that a *negative conjunctival reaction is to be taken as* evidence of unfavorable prognosis in manifestly tuberculous individuals (where bacilli are found), but I never said that a positive reaction indicates a favorable prognosis. Furthermore, I never stated that a negative conjunctival reaction occurring with a positive subcutaneous one indicated an unfavorable prognosis. In such cases I decide on a latent tuberculosis, while Röpke[2] actually states that I believe the opposite. This can be satisfactorily explained by the fact that Röpke and I differ[3] in the interpretation of what constitutes an active tuberculosis.

The prognostic conclusions of Teichmann and myself[4] are based on the course which the cutaneous reaction pursues. I wish it clearly understood that the prognostic deductions which I pointed out from the first have at least as great importance as the diagnostic ones, and have not been changed in any important features. This prognostic application is the reason why I practice both the cutaneous and the conjunctival reaction in all cases at the same time.

There is not, as may seem, anything mystical about making the prognosis depend on the course of the reaction. Let us consider a continued reaction (*Dauerreaction*) which indicates, according to my conclusions, a cure or a favorable course. Such a reaction indicates that at the point of reaction the tuberculous poison causes a connective tissue formation. It is only necessary to suppose that the seat of disease reacts or has reacted in the same manner through the incorporation of these poisons, and then the result obtained by the continued reaction is easily understood. It is not to be wondered at if empirical observations have led to the same conclusions.

Here we find a strictly logical state of facts whose correlations are not at first recognizable. Wolfson and I have made a great number of opsonic examinations, and we arrived at the conclusion that this trying procedure gives no better diagnostic results than an exact clinical examination in combination with the use of local reactions. The control of a tuberculin treatment by the determination of the opsonic index is another matter.

We supposed that we would find a high opsonic index in cases of strong tuberculin reactions, and particularly in cases showing a *Dauerreaction*. This was not at all the case, and it only gradually developed why this was so. A high *opsonic index is produced by absorption of* tuberculous poison from the focus of disease. This is prevented by the formation of connective tissue and explains, therefore, the absence of a high opsonic index.

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* Manufactured in Hamburg, Hermanstrasse, 5.

[1] Die Gefahren der Ophthalmoreaction und ihre Vermeidung, Wien. klin. Wchnschr., 1908, No. 33.

[2] Beitr. z. Klin. d. Tuberk. (Brauer's), ix, No. 3.

[3] Röpke and Wolff-Eisner: Beitr. z. Klin. d. Tuberk., 1908, x, 2.

[4] Die prognostische Bedeutung der cutanen und conjunctivalen Tuberkulinreaction, Berl. klin. Wchnschr., 1908, No. 2.

These opsonic experiments, together with our experiments concerning the binding of complements in tuberculous subjects,[5] prove that the poisons from the tubercle bacilli are absorbed, being identical in their effect with tuberculin. *This fact is of great fundamental importance, because it explains the difference in the* opinions of many observers which could not otherwise be explained. It is well known that to-day there are adherents and opponents to the tuberculin treatment, both from a diagnostic and therapeutic standpoint, the one side continuously reporting injurious effects which have not been observed by others.

The above-mentioned facts demonstrate that when a *patient is injected with tuberculin the same process* takes place in him which would eventually develop as the result of absorption of tuberculin from his own tuberculous lesions. Under these circumstances it is dependent on the point of view of the observer whether he holds the tuberculin injection or the disease itself accountable for the result. The same fact explains, it seems, *what is apparently paradoxical, that the statistics of the adherents of tuberculin do not differ greatly* from those of its opponents. I wish to state, in passing, that no good basis exists for the compilation of statistics of pulmonary disease. I shall discuss this on another occasion.[6]

Inasmuch as in all tuberculous subjects tuberculin appears in the circulation, *it can be easily understood that the results with or without tuberculin treatment can not differ very materially.* It will remain for the future to determine which individual will require a tuberculin treatment. The observation of the local reaction, the study of the opsonins and the clinical course of the illness will be the determining factors.

Numerous experiments, the observation of local reactions and the work of others have convinced me that *there is a certain immunity to tuberculosis, an immunity against poisons* which have become soluble and another against the bacilli themselves. The latter is most likely a bacteriolytic one. The immunity against poisonous matter, freed by lysis, is not an antitoxic one, but corresponds to the mechanism of the natural immunity against toxins which I have recently described.[7]

The toxin immunity of the naturally *non-susceptible* animal consists *of the binding of the poison by organ receptors.* (This stands in contrast to active immunity of an animal originally susceptible.) If endotoxins are bound, as described above, for natural immunity, the fixation seems often to occur by means of the receptors in connective tissue.

Two cases will illustrate this. The cutaneous reaction was applied to both subjects. *They then received* 1, 3 and 5 mg. tuberculin by subcutaneous injection and reacted with increasing fever. When 7 and 9 mg. were used, the general reaction did not occur, but in place of it an intense inflammation of the old cutaneous reaction appeared (in one case erysipelas and in the other an intense furuncle). I have repeatedly produced these phenomena in cattle. *Their interpretation involves great difficulty and is only possible for those who have an experimental training in the fundamental work of natural immunity against toxins.* The tuberculin, which has probably been made absorbable by lytic processes, is carried to those points at which the receptors are located. These are essentially the foci of disease, but other places can act as foci with receptors. If all the tuberculin is bound here, a tuberculin *injection will cause a local reaction. If it is only partially bound there will be a weakened or delayed reaction and a late general reaction. We are thus enabled* to protect the general organism from the influence of the tuberculin poisons by directing their action to less vital tissues, as, for instance, connective tissue, and we shall probably be enabled to make therapeutic use of the fact. Taking it for granted that the production of *such receptors in the connective tissue will be of most advantage, and considering the numerous observations made by Holländer, Joseph and others,* that certain forms of skin tuberculosis preclude tuberculosis of the lungs, we can understand[8] that after an injection of tuberculin the local reaction can appear before the general reaction, or even that the general reaction that *is to be expected, does not appear at all or is influenced by its progress. For some time past* I have been enabled by intracutaneous injections of small doses of tuberculin, or through the inunction of tuberculin ointment, to obtain in patients with lung disease artificial skin foci. In my second edition of my "Ophthalmodiagnose"[9] *it is my intention to give more accurate reports of the fundamental principles involved in this therapeutic measure, but I shall not allow myself to be misled into reporting successful results too soon.*

It can be easily seen how in this field purely theoretical are most intimately connected with practical results, of which the conjunctival reaction, the initial step in our observations, is the most palpable proof.

I should like to call the attention of veterinarians to the fact that *the application of the conjunctival method in cattle* presented points of extreme difficulty. In the experiments that I have made with the aid of the royal Prussian agricultural department, *the principal difficulties* have been overcome. It is to be hoped, therefore, that in the veterinary practice the conjunctival reaction will be developed in as exact a degree as in the human species.

SUMMARY

Let me give a summary of my remarks:

1. The subcutaneous and the cutaneous methods are specific reactions for tuberculosis. As they both demonstrate active and latent tuberculosis, their use is extremely limited for clinical diagnosis.

2. The positive conjunctival reaction shows only active tuberculosis.

3. The conjunctival reaction *in clinically healthy individuals makes the suspicion that they are affected* particularly strong.

4. A negative result in those manifestly tuberculous justifies a bad prognosis.

5. In advancing tuberculous disease negative reactions become more frequent.

6. A positive conjunctival reaction does not *justify* a good prognosis, *but this is the case only in the so-*

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[5] Ueber Ergebnisse der Komplementablenkung mit Tuberkelbazillenderivaten als Antigen bei Tuberkulose und Infektionskrankheiten, Wien. klin. Wchnschr., 1908, xxi, No. 37, p. 1296.

[6] Die Bedeutung der lokalen Tuberculinreactionen für die Heilstättenfrage, Ztschr. f. Tuberk., December, 1908.

[7] Die Bindungsverhältnisse der Organgewebe gegenüber Toxinen, Centralbl., 1908, xl

[8] c. f. Wolff-Eisner "[illegible]se, Würzburg, 1908.

[9] Issued January, [illegible] Würzburg, and entitled "Frühdiagnose und Tuberkuloseimmunitat."

called *Dauerreaction* (continued reaction), a form of the cutaneous reaction.

7. It is possible to create receptors in tissues that are indifferent as regards life, such as connective tissue, these receptors attracting tuberculin and localizing the toxic action. This observation is of therapeutic value.

SUPPLEMENTARY REMARKS

My paper could not include all the investigations concerning the theory of the action of tuberculin, especially the lytic theory of the tuberculin reaction. Some facts are given in the first edition of my book, which was published in New York by Wood & Co., Oct. 10, 1908; new facts will be found in the *Berliner klinische Wochenschrift*, 1908, No. 30, p. 317. The second German edition will be published as mentioned above.

When I read my paper at the meeting of the German Medical Society last week, the chairman pointed out that the name "ophthalmo-reaction" is a misnomer for several reasons. At the same time he stated my absolute priority. At the same meeting he said that I came to America to stand up for my rights. This was not my intention, because I thought that there was no necessity; but while in the library of the Rockefeller Institute reading about one hundred papers of the American literature concerning the matter, I found only Calmette mentioned. I claim that I made known the conjunctival reaction in a discussion of the first paper of von Pirquet on May 15, 1907, while Calmette made his communication to the Academy of Sciences, June 16. To Calmette belongs the credit of having greatly assisted in having the reaction quickly adopted by the profession.

There can be no question about these facts: Calmette himself points out that the paper of von Pirquet was the cause of his investigations, and this paper contains my communication about the discovery of the conjunctival reaction. It is not generally known that on the same day on which Calmette read his paper, Vallée also read a paper concerning conjunctival reaction in cattle in which he stated that his investigations were undertaken in connection with my discovery.

I am glad to state that there is no point of difference between Calmette and myself after his publication at the International Tuberculosis Congress in Washington, but only with his above-mentioned investigators. I would like to suggest to him the appropriateness of calling the reaction by the names of both authors.

Of greater importance to me than the question of the priority of the discovery of the reaction is the part I took in building up the scientific structure which is based on it and its application for the prevention of tuberculosis. I should be only too glad to work harmoniously with all those who have the same aim.

There is no difficulty in applying the reaction, but the matter is not as simple as it may appear. It took my collaborators several months before they were able to carry out my intentions. In cases in which there is a contradictory result with the reaction, it is absolutely necessary to compare the results with the findings of the physical examinations in order to avoid the wrong interpretation. I should like to have any one who can not exclude apparent contradictions bring the matter before me. Many a physician has come to me with a very critical point of view, but no one has departed unconvinced.

Berlin, N. W., 8 Albrechtstrasse.

Principles of Animal Nutrition.—The natural foods of all species of animals contain more or less proteids, mineral matter, fats and carbohydrates. No matter how widely the forms of food eaten by different kinds of animals may differ, they will be found to contain these essential basic nutritive elements. The problem of nutrition is the same in all animals so far as the principle goes, but there is a great variety of methods by which the necessary food elements are obtained and digested, each species having organs specially adapted for securing and digesting its natural food.—G. R. Pisek, in *Amer. Jour. Obst. and Dis. of Women and Children.*

THE SURGERY OF SYPHILIS *

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The time allotted to me will not suffice for more than a brief survey of the conditions demanding surgical intervention occurring in syphilis.

I first desire to emphasize the fact that many practitioners overlook most brilliant opportunities in the treatment of syphilis by regarding the disease too specifically. In other words, when they meet a condition which does not yield readily to antisyphilitic medication they appear to be helpless. As I will endeavor to demonstrate, there are many instances in which radical measures of a surgical character constitute the primary indication, internal medication occupying an almost secondary position in the cure of the given lesion. It is, of course, acknowledged that in such cases, once the lesion is under control, specific medication is a *sine qua non* to complete the cure of the constitutional condition and prevent recurrence of the lesion.

CHARACTER OF LESIONS WHICH REQUIRE SURGERY

The initial lesion *per se* rarely requires the knife. Time was when some of us were hopeful that excision of the initial lesion would at least modify the subsequent course of the constitutional condition. A large experience in this direction in an experimental way convinced me long ago that such hopes were ill-founded. An occasional case arises in which the induration of the initial lesion is very persistent, defying specific medication for a long period. Under these circumstances the persistence of the lesion may be very embarrassing, especially as regards the marital relation and the necessity of concealing the patient's condition from those about him. Here a clean free excision of the indurated area is sometimes of great advantage. It must be remembered, however, that unless the primary lesion has fully matured, induration is likely to recur in the incision, forming a chancre much more formidable than the original. The more thoroughly the patient has been treated by mercurials before the excision has been made, the less likelihood there is of its recurrence. The most frequent condition calling for surgical intervention in primary syphilis is concealed chancre or a mixed sore, with phimosis.

I long ago ceased delaying in cases of this kind, and am convinced that the risk of extensive infection of the wound in case a mixed sore exists, which, by the way, can not always be proven by autoinoculation, is much less than by allowing the lesion to progress without diagnosis or proper treatment. So far as my own experience goes, I have never had occasion to regret a dorsal incision of the prepuce for the purpose of freeing the glands and inspecting and treating the concealed lesion.

Marked edema occurring in the course of chancre sometimes demands multiple punctures for drainage. Where the edema is persistent and the lesion is true chancre, this method is preferable to allowing the edema to be replaced by connective tissue hyperplasia and extensive integumentary induration—circumstances which demand the knife later on.

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* Read before the South Side Branch of the Chicago Medical Society in a Symposium on Syphilis, Oct. 29, 1908.

In mixed sores and superadded pus infections of the initial lesion, with or without chemical or traumatic irritation, syphilitic lymphatics may be followed by abscesses in the course of the lymphatics of the penis. Obviously incision is demanded here.

It is hardly necessary to state that syphilitic bubo *per se* does not require surgical treatment. When chancroidal, pus, or tuberculous infection is superadded to the syphilitic, the knife is, of course, necessary.

I wish to make a special plea here for thorough extirpation of the infected glands; half-way measures are not, in my experience, productive of good results.

The surgery of secondary syphilis is in general still more limited in its scope than that of primary. Cases arise, however, in which edema of the genitals followed by permanent induration requires the use of the knife. These conditions rarely arise in well-treated patients, who are leading fairly correct lives and whose surroundings are hygienic. Occasionally in the course of secondary syphilis obstinate mucous patches and ulcers may do well under light curettement. Various conditions of the jaws and teeth bear a very important relation to mucous patches and ulcers and require surgical treatment.

As time goes on in cases of uncured syphilis surgery is likely to assume a more and more important position in the management of the case. The same condition of indurating edema to which I have already called attention is often met with in broken-down patients suffering from tertiary syphilis. The connective tissue hyperplasia not infrequently results in the formation of extensive tumors about the genitalia, tumors which have been mistaken for malignant disease or simple new growths of a non-syphilitic character. Indeed, the hyperplasic tumors may readily be said to be non-specific, inasmuch as they are sequelæ of syphilis rather than due to syphilis *per se*. They may persist long after the constitutional luetic condition is under control. The mistake is very often made of giving large doses of mercury and iodid of potassium for a prolonged period in these cases, in the fruitless attempt to cure a lesion which is no longer syphilitic, but of a purely surgical character and should be dealt with just as any other new growth would be dealt with.

Huguier long ago called attention to cases of this kind under the generic term of esthiomene. The late R. W. Taylor wrote a most classical treatise on this class of cases. I have at various times written papers along similar lines.

Broken-down hospital patients with chronic chancroid and old syphilitic infection are more likely than any other class of patients to develop connective tissue tumors about the genitalia. Gumma in certain situations should be treated surgically more often than is the custom. I believe that obstinate gumma of the brain, in which accurate localization is possible and the symptoms do not yield quickly and satisfactorily to internal medication, should be operated on, that is, they should be treated like any other tumor in the same situation. Obstinate gumma of the skin or other accessible situations should be removed by the knife more often than they are. It is by no means unusual in my experience to meet patients who have been dosed to the verge of the grave by mercury and iodid of potassium in a vain attempt to cause resolution of a gumma which a clean operation with the knife would have speedily removed. Many such patients need no specific medication, for, as a rule, they have had enough and to spare of that, but demand good food, fresh air, tonics, and steel in the form of the surgeon's knife.

What I have said of simple gumma is, in my opinion, true of stubborn gummy ulcers. If the indurated area underlying these ulcers be cut away, healing is likely to be very prompt, always providing the constitutional management of the case has been conducted judiciously. Be it understood, I am not recommending the knife as a cure for syphilis, but as a substitute for irrational over-medication in cases in which the patient is suffering not from syphilis *per se* but from sequelæ of the disease.

In syphilitic bone disease more barbarities are inflicted on the sufferer by overdosing with specific remedies than in any other lesion occurring in syphilis. Cases of syphilitic periostitis in which the node is accessible obviously demand constitutional treatment; but if they do not yield readily the knife should be freely used. Many a case of extensive caries and necrosis results from the practitioner's ignorance of ordinary surgical principles in the management of syphilitic bone disease. When caries and necrosis have occurred, nothing could be more absurd than an attempt to cure the bone condition by internal medication, and in nearly all of these cases the patient is overdosed. Mercury and iodid of potassium must, of course, be the mainstay in the constitutional condition, but the local condition should be treated on its merits as though it were due to causes other than syphilis.

THE REPLACING OF GUMMATA AND ULCERS BY MALIGNANT DISEASE

I wish to call attention in passing to the frequency with which gummata and obstinate ulcers of the tongue are transformed into or, more accurately speaking, replaced by malignant disease. I have had a large series of cases under my observation in which ignorance of this fact has resulted in the loss of the golden opportunity for the cure of the case by surgery. In most of the cases that have come under my care the patient has been dosed for months and perhaps years for syphilis. If microscopic examinations of the tongue have been made the result has been either doubtful or negative, and so the practitioner has gone on and on with his iodid and mercury and the patient has got no better rapidly. Be it noted that in this class of cases mercury and iodid of potassium are not only beneficial but very injurious. In one case in which I operated for removal of the tongue the patient had been under constant observation for three years, and about ten or eleven microscopic examinations of the tissue of the tongue had been made by different experts, the reports on which were negative. I made a diagnosis of probable epithelioma of the tongue and of undoubted malignant disease. My diagnosis was received with great incredulity simply because the judgment of the surgeons who had examined the tongue was clouded by the undoubted fact that the process under consideration was a continuation of syphilis of the tongue. Four days after my examination hemorrhage came on, which was so severe that an emergency operation was performed and the tongue removed. Extensive sections unequivocally demonstrated epithelioma.

In another recent case in which I removed the tongue one expert who examined the tissues microscopically pronounced the process benign; the other pronounced it malignant. I pronounced it "surgical," and removed the tongue. Sections after removal plainly showed the process to be epithelioma.

In another case of my own occurring some years ago I had the patient under observation for nine or ten years, during which time he had recurrent attacks of gumma of the tongue. The gummy infiltration left circumscribed tumors here and there in the substance of the organ. He passed from under my observation and some months later, while at Hot Springs, Ark., severe ulceration of the tongue came on and the tissues began to break down very rapidly. Internal medication and baths having only a bad effect, he was referred back to me. An examination by an eminent microscopist was negative, but I removed the entire tongue, with the galvano-cautery, just the same. Extensive sections and microscopic examination after removal showed the process to be sarcomatous. Recurrence occurred about six months later in the glands of the neck; there was erosion into some large blood vessel, and the patient died suddenly of hemorrhage.

So many cases of a similar type have come under my observation that I have no hesitancy in saying that the profession as a whole is woefully negligent and unobserving in this particular class of cases. I have arrived at the point where, when the microscope is guessing, I am perfectly willing to hazard my reputation by playing the only surgical trump at my command and removing the tongue. I will say in passing that the removal by surgical measures of the hyperplastic nodules and thickened areas of the mucous membrane of the tongue resulting from gumma, ulcers and mucous patches will, if performed early, prevent many of the serious conditions of the organ encountered in tertiary syphilis.

CONCLUSIONS

I wish again to emphasize the fact that lesions due directly or indirectly to syphilis should not always be regarded as specific from the standpoint of treatment. They often demand surgical intervention, based on the merits of the particular lesion, and more or less independent of the constitutional infection, so far at least as rational treatment is concerned.

In conclusion I wish to say that operations on syphilitic patients in whom the constitutional disease is under complete or fair control by specific medication are likely to result in primary union of the wound just as though syphilis did not exist. In clean aseptic incised wounds repair will often occur quite as rapidly as in non-syphilitic subjects. In open wounds or in chronic non-specific lesions occurring in syphilitic subjects, where irritation is marked and persistent, the syphilitic constitution unquestionably retards repair. Here the rational employment of mercury and iodids is an indispensable adjuvant to the knife. Briefly, I might say that in chronic syphilitic lesions requiring the knife surgery is the handmaiden of specific therapy. In operations on non-specific conditions occurring in syphilitic subjects the importance of respective rôles of surgery and therapeutics is reversed, the knife playing the principal and therapeutics the secondary rôle.

100 State Street.

Curds in Infants' Stools.—F. B. Talbot in the *Boston Medical and Surgical Journal*, states that small curds are composed mainly of fat, mostly in the form of fatty acids and soaps. There is no evidence that they contain casein-like material, and like the normal stool, they have a low percentage of nitrogen. They represent the fat in food rather than the protein.

THE RELATION BETWEEN PSEUDOHEMISYSTOLE AND DROPPED BEAT

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Owing to the recent advances in the methods of investigation of the physiology of the heart, many interesting studies have been recorded and numerous hitherto doubtful phenomena have been explained. Special attention has been paid to the disturbances of the heart in those conditions known as "heart block," "arrhythmia" and "hemisystole."

It is our intention to present briefly a clinical study showing the relation between the so-called dropped beat and pseudohemisystole. Hemisystole is a condition allied to cardia bigemina, in which, during the second beat of the heart, the left ventricle fails to contract. This phenomenon was first described by V. Leyden;[1] Unverricht[2] next showed the relation between cardia bigemina, hemisystole and systolia alternans. The relationship of these conditions is shown in the following outline taken from Sahli:[3]

Condition.	Cavities.	First Beat.	Second Beat.
Cardia bigemina....	Right heart.	Effective.	Effective.
	Left heart.	Effective.	Effective.
Hemisystole........	Right heart.	Effective.	Effective.
	Left heart.	Effective.	Ineffective.
Systolia alternans..	Right heart.	Ineffective.	Effective.
	Left heart.	Effective.	Ineffective.

Although hemisystole has been observed in the exposed hearts of animals, most authors deny the possibility of its occurrence in man, except in the hearts of the dying (Mackenzie[4]). Most observers explain its occurrence in man (with Riegel[5]) on the basis that the left ventricle does not fail to contract but contracts ineffectually, thus being a pseudohemisystole.

MECHANISM OF ARRHYTHMIA

As pseudohemisystole is a form of heart irregularity, let us briefly consider the mechanism of arrhythmia. According to the studies of Wenckebach, Cushny and Mackenzie, arrhythmia is usually caused by the occurrence of a premature or extrasystole; these systoles are always excited by unphysiologic irritations. As is well known from experiments, the heart, shortly before its systole and lasting for a short period after, is in a condition of non-irritability; this period is known as the refractory phase. The irritability of the heart increases as the diastole advances. From what has been said it is clear that if a stimulus is liberated early in the period of diastole or, in other words, soon after the refractory phase, the heart will beat ineffectually, the inefficiency depending on the time the stimulus is liberated; should this occur very soon after the refractory phase the heart beat will be futile and will not propagate a pulse wave. This constitutes a dropped or missed beat. Marey very well illustrates this in the following diagram (Fig. 1),

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1. Virchow's Arch. f. path. Anat., 1868, xliv.
2. Berlin. klin. Wchnschr., 1890, xxvi.
3. Diagnostic Methods, p. 296.
4. Study of the Pulse, 1902, p. 292.
5. Deutsch. Arch. f. klin. Med., xxvii, 393; Samml. klin. Vortr. (Volkmann's), No. 227.

in which the dotted line shows the pressure necessary to open the aortic valves and consequently produce a pulse wave.

Premature systoles causing dropped beats may occur regularly or irregularly; the regularity may assume various groupings, as every other beat, every third beat, etc. If it occurs regularly every other beat we have a condition in which the heart beats in groups of two (bigeminus), the second contraction not propagating a pulse wave, these manifestations being likewise the characteristics of pseudohemisystole. The two cases to be described we have selected as illustrations, the first showing an irregularly intermittent dropped beat, the second a regularly consecutive dropped beat. The first preserves, during the intervals of drop-beat, the same relationship between the venous pulse, cardiac cycle and arterial pulse as is regularly shown in Case 2.

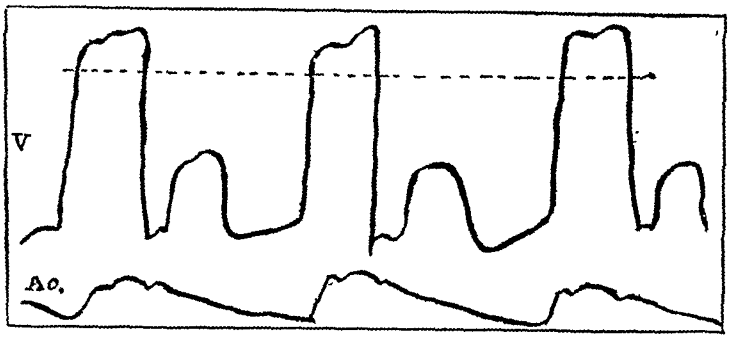

Fig. 1.—Diagram illustrating arrhythmia (dropped or missed beat). The dotted line shows the pressure necessary to produce a pulse wave.

The tracings of Case 1 (Figs 2 and 3) show the gradations from ordinary extrasystoles, the ventricle contracting effectually to a condition of ineffectual ventricular contraction or dropped beat. In Figure 2 we have a gradually decreasing efficiency of the ventricular contractions illustrated by the smallness of the pulse wave corresponding to the extrasystoles. The jugular pulse is of the auricular type.

In Figure 3 is shown the ultimate result of the progressively increasing inefficiency of the left ventricle during the extrasystole, and there is seen a condition in which there are two apex beats, to the second of which there is no corresponding arterial pulse and a double venous pulse of the auricular type.

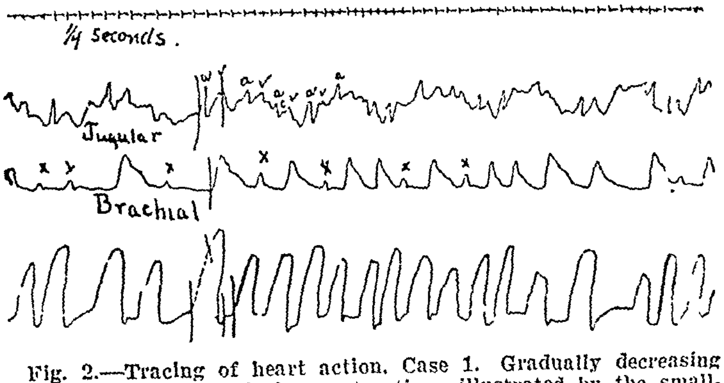

Fig. 2.—Tracing of heart action, Case 1. Gradually decreasing efficiency of the ventricular contractions illustrated by the smallness of the pulse wave corresponding to the extrasystoles. In tracing of jugular pulse (of the auricular type) a indicates auricular wave; c, the carotid wave, and v, ventricular wave. In tracing of brachial pulse, x indicates dropped beat.

The tracing from Case 2 (Fig. 4) shows constantly the above conditions, namely, a double apex beat, a single arterial beat and a jugular pulse showing a double auricular beat; that these findings indicate a double contraction of the heart is evident from the double apex beats, that the auricles participate in the double contraction is shown by the double venous pulse, that the left ventricle contracts ineffectually is shown by the want of an arterial pulse during the second beat. From the above it is clear that we are dealing with a case of pseudohemisystole. On one occasion during a marked irregular action of the heart several tracings were obtained showing not only extrasystoles with normally transmitted pulse waves but single extrasystoles with a dropped beat and double extrasystoles with a dropped beat within a short period of time.

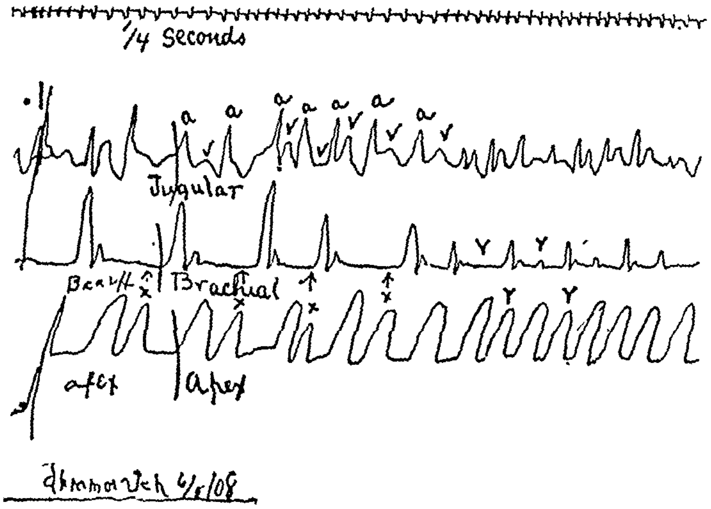

Fig. 3.—Tracing of heart action, Case 1. Progressively increasing inefficiency of left ventricle during extrasystole: two apex beats, to the second of which there is no corresponding arterial pulse and a double venous pulse of the auricular type. In jugular, brachial and apex tracings, a, c, v and x indicate same as in Figure 2; y indicates extrasystoles propagated.

Of special interest in Case 2 is the fact noted that the administration of atropin completely changes the character of the pulse; the ineffectual ventricle functionating properly, propagates an arterial pulse, and we have the tracing shown in Figure 5. This result was obtained by the administration of 1/50 gr. of atropin hypodermatically, and the condition lasted for five minutes; in spite of repeated attempts a jugular tracing could not be obtained during this period, probably due to the fact that as the heart was functionating properly there was no engorgement of the right side of the heart. During a period of administration by mouth of 1/100 gr, atropin thrice daily for a few weeks the same condition was presented several times a day. During this period it was noted that exercise and rest influenced the action of the heart, the former inducing an increase in the pulse wave, each wave corresponding to an apex beat, the latter causing the heart to assume its former condition of ineffectual contractions.

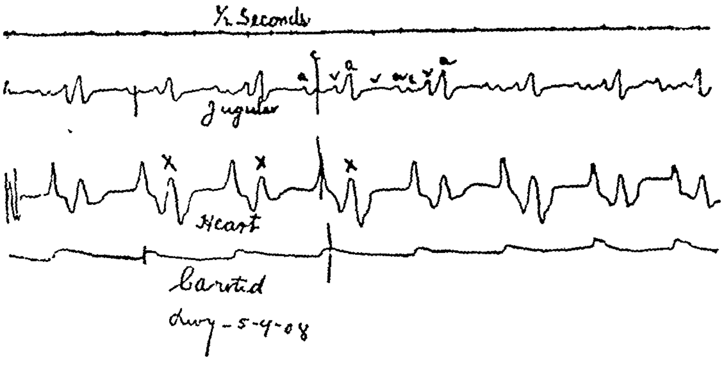

Fig. 4.—Tracing of heart action, Case 2. Double apex beat, single arterial beat, and a jugular pulse showing a double auricular beat, a, c, v and x, indicate same as in Figure 2.

It will be noted in the synopsis of Case 2 that over the apex are heard three sounds: *Lubb—Dupp—Dubb.* with each double heart beat; that the absence of the second beat is due to an ineffectual ventricular action is shown by the appearance of four tones, two to each beat of the heart during the above described action of the heart under the influence of atropin. It was noted in Case 1 that during the period of dropped beats there was heard at the apex a tumbling action of the heart, which, when all systoles were effectual, was replaced by a blowing systolic murmur.

From the evidence that extrasystoles can produce dropped beats as in Case 1, and the occasional occurrence of indisputable extrasystoles in Case 2, we infer that the regularly consecutive dropped beats of Case 2 are due to premature extrasystoles which were insufficient to open the aortic valves and thus cause a pulse wave.

Case 1.—*History.*—A. A., is a watchman by occupation, married. Family history is negative: uses alcohol moderately, smokes excessively and takes tea and coffee moderately. Present illness began five years previously with loss of appetite, vomiting, epigastric pains, dyspnea, cough, heaviness after eating, swelling of the feet, palpitation and occasional precordial pains, all of which the patient still complains of.

Examination.—Patient is fairly nourished, skin of face and extremities cyanotic, superficial venules distended. Patient is dyspneic, respiration 30. Chest is barrel-shaped, and capacious. Apex beat is seen in the sixth space, seven inches from the mid-sternal line. It is most conspicuous over an area of 1½ inches, acts in a see-saw fashion, and spreads concentrically to the fifth and seventh spaces, and at times even to the fourth space. Heart action is very irregular; dropped beats are present at frequent intervals; the pulse rate varies from 40 to 80, pulse is soft and there is a high grade of arteriosclerosis and visible locomotion. Systolic pressure, 120; diastolic, 80 (Erlanger). A well marked jugular pulsation is constantly observed. Percussion shows the upper border at second rib and right border at right edge of sternum; left border in the sixth interspace reaches to one-half inch within the anterior axillary line. A blowing systolic murmur is audible at irregular intervals, transmitted into the axilla. It is found that the murmur occurs only when the heart produces a radial pulse, and is absent when the beats are dropped during the latter period the heart's action is tumbling. Lungs show a high grade of emphysema. Fingers are clubbed and finger nails curved. Legs are slightly edematous. Urine shows trace of albumin.

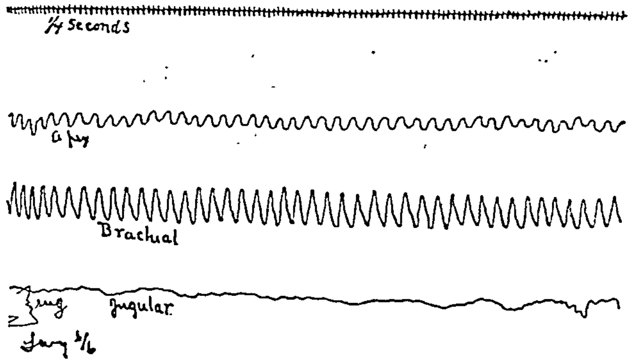

Fig. 5.—Tracing of heart action, Case 2, obtained after administration of atropin.

Case 2.—*History.*—S. L., aged 34, is by occupation a presser; married. Family history is negative; uses alcohol regularly and sexually immoderate. Had gastroenteric disturbances twelve years ago. Present illness dates back seven months, commencing with pains in the joints and weakness in the extremities. At present he complains of pains in the joints when active. It is well to note that, despite the peculiar action of the patient's heart, he is apparently very slightly affected by it.

Examination.—His general development is good; chest and lungs negative. The apex beat is felt and seen in the fifth interspace within the nipple line. Area of dulness increases downward and to the left. Three sounds are audible at the apex, but no murmurs; first sound is muscular in quality, followed by two sounds in rapid succession. At the base the same sounds are also heard. Pulse rate is 42, radial artery slightly thickened. Systolic pressure, 150; diastolic; 115 (Erlanger). Pulsations in the jugular is distinctly visible. Blood and urine examination negative.

CONCLUSIONS

1. From our observations in numerous cases of cardiac arrhythmia, dropped or missed beats occurring from time to time are not rare. Such exquisite types as we have illustrated above are, however, exceptional.

2. A condition demonstrating the mechanism of pseudohemisystole is observed in irregularly acting hearts during the periods of consecutively dropped beats.

3. A regularly consecutive dropped beat constitutes pseudohemisystole.

4. That this condition is not due to disturbances of conductivity is shown by the response of the ventricle to the action of atropin.

5. The absence of a second sound to the second beat, so well shown by Case 2, is due naturally to the nonclosure of the unopened aortic valves.

6. The absence of a murmur during the period of dropped beat in Case 1 further demonstrates an ineffectual ventricular contraction, since the force exerted was insufficient even to cause a regurgitation of blood into the auricle and produce a murmur.

7. From a study of jugular tracing in both cases it is evident that the disturbance is caused by premature ventricular beat, as the auricles maintain their rhythm (see large auricular wave during irregular period and the absence of ventricular radials during these periods).

We take occasion to express our thanks to Dr. S. Wachsmann, medical director of Montefiore Hospital, for calling our attention to these cases.

Broadway and One-Hundred and Thirty-Eighth Street.

THE MEDICAL SOCIETY AND THE MEDICAL MEN OF ONE HUNDRED YEARS AGO *

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That medicine is an all-absorbing profession is a trite saying. If we were to bring two doctors into this room, the one from the coast of Maine, the other from the coast of California, the chances are more than even that they would be talking medicine within ten minutes. The one would brag a bit over a cure he had effected when recovery seemed impossible, and when even Dame Nature herself was wringing her hands in despair: the other would shake his head gravely over the mistaken diagnosis of a brother practitioner, a diagnosis that should have been as plain as the nose on one's face, and which was instantly made by the narrator when called in consultation. These little preliminaries settled, both would begin to discuss cases in which the patients obstinately refused to be cured in spite of diagnostic skill or scientific treatment.

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* Read at the centennial anniversary of the Strafford County and District (N. H.) Medical Society.

In order that medical men might do these things on a larger scale, societies were organized. The physicians of New Hampshire united in 1791 to form a state society, and seventeen years later the Strafford District Society, whose centennial we celebrate to-day, had its inception. In the summer of 1808 Caleb Morse, Ichabod Shaw, Joseph Boyer and Asa Crosby sent a circular letter to all the physicians of Strafford County, inviting them to assemble in Rochester on the 6th day of July to form a county medical society. Twenty-three men responded to the call. We find on the records of that day such names as Caleb, Jedediah, Ichabod, Zadoch, Jabez, Abner and Timothy. Surely, boys with names like these must have been sober-minded youngsters; and they have left plenty of evidence to prove that they became serious, hard-working men. Listen to the preamble of that circular letter:

"As health is essentially necessary to the happiness of society, and as its preservation or recovery is closely connected with the knowledge of the animal economy and of the properties and effects of medicines; and as the benefit of medical institutions formed on liberal principles, and encouraged by the patronage of the law, is universally acknowledged, we do, therefore, agree to be governed by the following, to-wit:" and here follows the order of business of the day.

Surely, those lines are full of the spirit of good will toward men, and they show a laudable desire for greater proficiency in the chosen profession, a proficiency which was to be attained by coming together at stated intervals for a mutual interchange of experience. The members looked to the New Hampshire State Medical Society for that "patronage of the law" set forth in the preamble, and immediately petitioned that body for permission to establish a subordinate society. Evidently consent was not easily obtained, for at the annual meeting of 1810 it was voted that a committee should press their claim on the state society and in the event of failure said committee was instructed "to prefer a petition to the legislature at their next session in June to obtain a charter for a separate institution for medical purposes."

Realizing at last that her children were in earnest, the mother society, at the annual meeting held in Exeter, in May, 1811, chartered this present body under the title of "The Strafford District of the New Hampshire Medical Society." The association was now fairly launched and held three meetings each year, one at Dover, which was always the annual meeting, and two others at places agreed on previous to adjournment. In one instance the society voted to adjourn to meet again "as near Gilmanton Corner as may be convenient." Fortunately, this was the last meeting before the reconstruction; otherwise the services of a land surveyor might have been necessary to determine the exact spot for assembling. These early years seem to have been characterized by inordinate zeal. It was voted that every member should present something of interest at each meeting of the society, a vote that was soon reconsidered, for it caused an alarming percentage of absentees. A system of fines was instituted. An officer was assessed $1 for each absence from the meetings, and members were charged 50 cents for a similar negligence. Dr. Jabez Dow was appointed in 1813 to interview every member concerning his experience with lobelia inflata and hemlock gum, and to give a dissertation on these two agents at the next annual meeting. In 1814 Dr. Jabez Dow begged for more time. In 1815 he confessed that he was still unprepared and was granted a further extension. In February, 1816, lobelia inflata, true to its physiologic action, came up again, and this time Dr. Dow was excused from further service. It is interesting to note, however, that Dr. Asa Perkins immediately grappled with it and delivered a learned dissertation on its virtues in 1818.

They were not mealy-mouthed, those old fathers in medicine. In one instance two members were cited before the society for "imposing on the public a nostrum known as 'Savage's Deobstruent Billious Pills,'" and when they refused to reveal the composition of said nostrum they were promptly expelled and a notice of the action was published in the local newspapers. There was no hesitation, no hanging back to see who should bell the cat. Again, it was voted that Jabez Dow and Robert Woodbury be a committee "to enquire into the conduct of Dr. Josiah Lane and see what is best to be done with him." I have searched diligently to find what did finally happen to poor Dr. Lane, but the records are darkly silent. I suspect that he was boiled alive. There were no dead laws on the books. At nearly every annual meeting the secretary was instructed to notify certain members that unless they paid their taxes and attended the meetings more regularly they would be dismissed from the society; and this was no idle threat. The penalty was often enforced against delinquents.

Those in charge of the records of to-day can study with profit the work of their predecessors of a hundred years ago. Theirs was an iron age, and very fittingly they used an iron ink. Those pages written a century ago are as legible to-day as ever, while some of the writing of twenty years' standing is fading so rapidly that it will soon be indecipherable. County secretaries should remember that the keeping of records is a sacred trust and should select for the duty an imperishable ink. The chirography of that early day deserves mention. All wrote hands that are remarkably legible, while some are positively ornate. Dr. Moses Colby, that able secretary and enthusiastic Freemason, has left behind some remarkable specimens. He lived in the so-called antimasonic days. Evidently fearing that the order might be lost to the world from persecution, he has drawn on his records little shields filled with masonic symbols in order that future ages might find out the rite. In 1825, evidently inspired by the late presence in this country of the great French patriot, so dear to American hearts, he inscribed on his record for the year the legend, "U. S. A., Lafayette and Liberty."

Early in the history of the institution arrangements were made for receiving patients. In the records of the meeting for 1809 we find the following resolution:

> *Resolved*, That when any patient shall be offered to the association for examination it shall be the duty of every member to examine him or her satisfactorily, when the patient shall retire, and each and every member, beginning with the youngest, shall give his opinion of the disease and of the practice to be pursued.

A glance at one or two of these cases will be instructive.

A Mrs. Berry was brought in for examination. I quote verbatim:

> Dr. Lindsay's opinion was a general bodily debility and inaction of the whole system. Dr. Kittredge, calculi of the bladder and inflammation of the mucous membrane of the bladder, consequently a general debility. Dr. Morrison, dropsy of the ovaries. Dr. Hammons, general debility which is the cause

of the general symptoms, and occasional spasm of the neck of the bladder. Dow, Perkins and Drew gave no particular opinion.

From this we learn that "general debility," which so often appears in the death certificates of to-day, is sanctioned by ancient usage.

A patient with phthisis was brought in on one occasion and the following treatment recommended: "Counter-irritation, digitalis, emetics, phlebotomy, sudorifics and bloodroot." In another instance a poultice of white pine bark worked wonders in a lacerated wound. It probably occurs to each one of you that the boiling necessary for the maceration of that bark saved the patient from infection. In this connection it is amusing, in the light of modern surgery, to note the evident astonishment of a doctor who reported "an extraordinary case of adhesion by first intention of an incised wound of the foot." In later years, when homeopathy had begun to thrive, we find the history of a case of delirium tremens which had fallen into the hands of one of Hahnemann's disciples. This man was giving his patient "the enormous dose of four drops of laudanum night and morning," and death was imminent. The reporter came to the rescue with three doses of fifty drops each, and wound up with a teaspoonful and a half as a binder, after which the patient "had no more convulsions." He lived.

Do not think that I have cited these cases to hold the treatment up to ridicule. Heaven knows that any of us who has been in practice twenty years and over may well scratch his head and look dubious over some of the things which were considered good practice in the early days of his career. The lusty farmer came to the doctor's office in 1808 and bared a brawny arm already scarred with numerous jabs of the lancet, for a "spring bleeding." And Dr. Ichabod or Dr. Jedediah canted the big bowl of blood this way and that under his critical eye, discoursed learnedly on "buffing" and "cupping," and the patient departed weak in the knees but happy in the consciousness that a long winter's accumulation of filth and disease had been drained out of him. We know better now. The lancet, the fillet and the bowl have long ago disappeared. When such a man presents himself to-day we draw the prescription pad to us and write for a machine-made, coal-tar combination, of whose properties we are ignorant, whose virtue consists of a chemical formula nine inches long and a name that no man can pronounce—and the patient takes it and feels better. *Post hoc, ergo propter hoc.* Until we are rid of the beam we can not extract the mote; and in trying to sketch for you a picture of this society in its infancy I shall be, indeed, chagrined if I fail to impress you with the sterling integrity of its founders.

Many of them drove thirty and forty miles in January to attend these gatherings. At a meeting held in Gilmanton in 1809 there were fifteen physicians present, coming from the following towns: Barrington, Barnstead, Dover, Gilmanton, Middleton, Moultonboro, Sandwich, Tamworth and Wolfeboro. When we reflect that there were no railroads in those days; that the highways must have been imperfect and often hazardous, necessitating for the doctor long journeys on horseback in all kinds of weather—then do we begin to realize how much in earnest those men were who attended those meetings so long ago. Surely theirs were lives of continual hardship and self-sacrifice, a fact that comes out most touchingly in their obituaries. Dr. Jabez Dow, whose name appears continually in the records, died at 63; Dr. Hammons died at 49; Dr. Jacob Kittredge, Jr., succumbed at 37, and of him it has been said, "No man in Dover could have been taken away whose loss would have been more severely felt." Several died between the ages of 35 and 45, sometimes from contagion taken at the bedside, and very often because of prolonged physical and mental strain which rendered them incapable of resisting the invasion of disease. The surgeons of to-day can not appreciate the strain of operating without an anesthetic. We read of that sturdy pioneer in surgery, Dr. Nathan Smith, that on one occasion, with tears in his eyes, he begged his assistant to throw himself across the bed that he might be hidden from the eyes of the trembling boy whose leg he was about to amputate.

Brethren, we possess in those early records of the Strafford District Society a priceless inheritance. Across the gap of an hundred years they come to us, bearing shining examples of steadfastness, of courage and untiring devotion. A few short years and a new generation shall search these pages for the meager record of our lives. God grant that it may be said of us, as it may be truly said of them, that the world was better for their having lived. Let us always bear in mind that the thing that shall comfort us when we step down into the valley of the shadow will not be the size of the estate we shall leave behind, not the places of honor we have held among men; but, rather, the reflection that we have been able to relieve some poor sufferer of his mortal pain, that we have been useful men in our generation, and that we may look forward with confidence to the reward which awaits honest labor.

Clinical Notes

TWO CASES OF MASTOIDITIS WITH INTRACRANIAL COMPLICATIONS*

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WASHINGTON, D. C.

Case 1.—*Epidural and perisinus abscess; no history of otorrhea; extensive bone disease; death from suddenly developed meningitis.*

History.—The patient, O. B., aged 33, on the advice of his family physician, Dr. Sansbury, called at my office on May 9, 1908. He gave a history of an attack of grip the latter part of March, when he first began to suffer with his ear. There was no discharge, but severe pain in the right ear, attended by throbbing and ringing noises. The temperature had ranged about 102 F. and he had had two chills. His chief symptom had been the intense pain just back of the right ear, extending up over the head on the right side. The pain was described as maddening, and as occurring in paroxysms with intervals of freedom. Formerly there was considerable "soreness" in this region. There was no history of any suppuration either in connection with his present trouble or at any time in the past.

Examination.—The mastoid region was found to present neither redness nor swelling; only some moderate enlargement of the peri-auricular lymphatic glands. Tenderness was elicited on direct pressure over the mastoid, but this symptom was not marked. No pus could be seen in the auditory canal. The drum membrane appeared red, thick and infiltrated; and though perforated in its anterior part, did not give exit to any discoverable secretion. A diagnosis was made of mastoiditis, with possible intracranial involvement, and the patient advised to submit to operation without delay. This he declined to do and returned to his home in the country.

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* Read before the Washington Society of Ophthalmology and Otology, Oct. 16, 1908.

Course of Disease.—About one week later (May 15) his trouble having grown worse instead of better, he returned for the purpose of undergoing an operation. In spite of his intense suffering the patient had continued to go about his work as a farmer, and had been, in fact, at work the morning of the day he called. He was sent to the hospital with instructions to prepare for immediate operation. The temperature on admission was found to be 104 F. In the afternoon vomiting of a projectile type developed. A rapidly deepening coma also set in, and the patient became difficult to arouse. The eyes and pupils reacted symmetrically to light; there was no stiffness of the neck.

Operation.—At 10 p. m., assisted by Drs. McKimmie and Miller, Dr. Burke administering the anesthetic, I made the usual mastoid incision curving about the auricle, which was however, supplemented by a horizontal incision extending backward, as soon as the extent of the bone lesion became apparent. The bone was soft and friable over a very wide area, and led backward into the occiput, far upward into the root of the zygoma and downward through the mastoid tip. A pulsating purulent focus was found posterior to the antrum, lying just over the sigmoid sinus. The very thick mastoid apophysis was completely removed, and the sinus uncovered over a distance of nearly two inches from the knee nearly to the bulb. Pus was found welling up from the latter region when the tissues of the neck were pressed on. The bone, which was soft and contained pus, was also removed in the middle fossa, freely exposing the brain in this region. The dura was found to be thickened and adherent. The lateral sinus, though slightly discolored, presented no evidence of containing a thrombus and we decided not to open it.

Postoperative History.—The stupor continued through the night, the patient's pulse being very weak, ranging from 85 to 95, and temperature about 103, respiration sighing. On the following day lumbar puncture showed a very turbid fluid of greenish-yellow color and foul-smelling. At 4 p. m. the temperature rose to 106, and the patient died at 6, never regaining consciousness.

The brain, thoroughly explored postmortem, disclosed no lesion other than a purulent meningitis; though careful search was made for an abscess, none could be found either in the cerebrum or the cerebellum. The lateral sinus was also opened and found to be free of any thrombus formation.

The points to which I direct attention in this case are:

1. The absence of any history of discharge, and the negative result as regards pus in the examination made of the ear. That there must have been pus formation in the middle ear at some period, however, is evidenced by the perforation which was present. The patient stated that in the beginning of his illness a "little hard substance like wax rolled out of his ear." Whether or not this be interpreted as a purulent mass, the case at least proves that we can not consider the history given by the patient, or even a negative finding on examination, as conclusive that we have before us an actual case of primary mastoiditis. It is always
strpre probable that the discharge has been so slight as
mighave passed undiscovered.
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charact the headache to point to the extensive amount of
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two agents at the non, after the patient had arrived at
Jabez Dow begged for very grave symptoms of meningitis
arose, which from its rapid progress to a fatal termination may be classed with the fulminating type.

CASE 2.—*Meningitis complicating acute suppurative otitis with scanty discharge; slight disease of mastoid; lateral sinus opened; lumbar puncture; recovery.*

History.—The patient, J. Y. S., married, aged about 25, had an attack about the middle of January, 1908, attended with considerable inflammation of the nasal passages, generally grippy pains and a fever which rose to about 103 F. She complained of an earache, but this ceased promptly on the appearance of a discharge from the auditory canal. In a few days, however, the earache again set in and it was on account of this symptom that she consulted me for the first time, January 18. The drum membrane was found hyperemic and, although there was no bulging, I thought best to open it, especially as there was some tenderness on pressure over the mastoid. Under the use of the ice-bag, constantly applied over the postauricular region and frequent boric acid irrigations the pain in the ear ceased, the mastoid tenderness disappeared and in all respects the patient seemed to be recovering. It was not until February 13 that I again heard from this patient, having been called to see her then in consultation with her family physician, Dr. Louis Johnson, who said that the patient did well at first, but about a week after the paracentesis began to develop new symptoms. There was little or no discharge from the ear, but intense headache, vomiting, delirium, rapid pulse and a temperature ranging from 100 to 103.

Examination.—We found no discharge coming from the canal, the perforation having apparently closed. There was no bulging of the drum, and no prolapse of the posterior or superior canal wall. The deafness on the affected side was almost complete. There was some doubt as to the tenderness being elicited on pressure over the mastoid. The patient complained a great deal of pain and stiffness in the region of the neck upon the corresponding side. The temperature was of a decidedly septic type, going sometimes up to 103, at other times falling to normal; constipation, furred tongue and chills were present.

Operation.—The patient was sent at once to the Episcopal Eye, Ear and Throat Hospital, where, on February 15, I performed an operation, assisted by Drs. McKimmie and Biscoe. In addition to the ordinary mastoid, the bone was removed so as to expose the brain and the lateral sinus. The mastoid was found to be but little diseased. The antrum contained some granular debris, but no free pus. There was no carious bone in contact with underlying cerebral structures. The dura was congested and showed some dilated vessels coursing over it, but there was no sign of an epidural abscess. There being some doubt as to the state of the lateral sinus, I decided to open it in view of the absence of other brain lesions, taken in connection with the septic type of temperature. It was found free from clot, and bleeding freely from both directions.

Postoperative History.—The patient for three days seemed much better, as regards pain, vomiting and mental condition. The temperature, which had been ranging from 98 to 100, fell on February 21 to normal. On February 22 it rose to 103 and on the 23d to 104 and then began marked fluctuations, going to 104 and dropping suddenly to 99; pulse ranging from 100 to 136. Leucocyte count made February 23 was reported to be 23,000. The patient now began to complain of very intense headache, and to be restless and noisy especially at nights, vomiting constantly, almost no food being retained. Occasionally involuntary micturition took place, there was decided photophobia, and general cutaneous sensitiveness; inequality of the pupils and sluggish contraction. The patient would lie generally with her knees drawn up, and complained considerably of her neck. The Kernig sign was found to be present in a moderate degree. Lumbar puncture was made and fluid examined by Dr. W. W. Wilkinson, who reported liquid to be cloudy and containing pus, but no micro-organism. At night especially the patient would become wildly delirious, and even under repeated doses of morphin and other sedatives would sleep but a very little while at a time. Her loud screams could be heard through the hospital and kept all the patients upset. As the lumbar puncture seemed followed by a general amelioration of the symptoms, it was repeated in about a week, removing again about two ounces of fluid, less turbid than before, still containing no micro-organisms.

Internally she took most of the time mercury and iodid of potassium. On March 1 we began collargol inunctions, used twice daily. On March 5 the clinical record showed that patient had a slight chill. In a few days, however, improvement set in and on March 8 temperature dropped to normal, and never afterward rose above 99. The mastoid wound did well from the first, and was completely healed in about two months. The hearing in the affected ear improved and the patient rapidly returned to normal.

This case, I think, is instructive in that it is an instance of a recovery from pronounced leptomeningitis, the clinical diagnosis being confirmed by the results of the lumbar puncture. It is one more to be added to the favorable cases previously reported by Macewen, Gradenigo, Brieger and others, which encourages us not to take an absolutely hopeless view on witnessing this dread disease develop as a complication of middle-ear suppuration. While from the given case I am not able to draw any satisfying conclusions as to the cause of ultimate recovery—whether it should be attributed to the operation on the diseased mastoid, removing the focus of infection, or to the lumbar puncture, relieving intracranial pressure and diminishing the amount of septic fluid, or to the possible beneficial influence of the collargol inunctions—I believe that in a similar case one need not hesitate to use all these measures, as each is indicated and possibly all three may contribute somewhat to the ultimate recovery of the patient.

Attention is called to the comparatively *insignificant* character of the aural symptoms. While not duplicating the former case in the absence of any history of suppuration, the discharge was slight and of short duration and had ceased *completely at the period* when the intracranial symptoms developed.

In the bone involvement a strong contrast is presented with the condition noted in Case 1, in which the bone *destruction* was far-reaching and profound, the dural membrane being in direct contact with diseased bone over a considerable area. In this, on the contrary, necrosis was very slight, the disease not reaching the inner table at any point.

815 Connecticut Avenue.

PHOSPHATIC CALCULUS OF THE POSTERIOR URETHRA

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Assistant Surgeon, Roosevelt Hospital, Out-Patient Department of Genitourinary Department
NEW YORK

Patient.—J. H., came to the clinic complaining of difficult urination, increased urination and decided urgency, with occasional attacks of complete retention. One such attack had occurred the day previous, for the relief of which he had been catheterized at another institution. He had had an attack of complete retention one year previously, and gave a history of several attacks of urethritis during his youth. He had been treated for stricture at one time. He had no hematuria and no pain.

Examination.—The patient was a well-preserved man about 55 years old. The urine was very cloudy and contained many long shreds. The catheter met with obstruction in the prostatic urethra. A small woven bougie passed into the bladder. A No. 10 (French scale) tunneled steel catheter guided over a whalebone filiform passed over a long soft calculus on the floor of the posterior urethra. The end of the calculus was seen through an endoscopic tube.

Operation.—Under cocain anesthesia I attempted to remove the stone through the endoscope, using a pair of long forceps with narrow blades, but succeeded only in breaking off small fragments of the stone, as the narrow caliber of the tube prevented the handle of the forceps opening to an extent sufficient to grasp the calculus firmly in the blades. As the pain became intense and hemorrhage profuse, further manipulations were not attempted at the time, since it appeared that an external urethrotomy would be necessary. Soon after arising from the table the patient felt inclination to urinate, and when he tried to do so the stream of urine forced the stone to within one inch of the external meatus, from which position it was easily removed with thumb forceps. After removal it was found to be a soft, friable, phosphatic calculus, 0.5 cm. in diameter and 3 cm. long, cylindrical, conforming to the shape of the posterior urethra. A size 26 steel sound was easily passed into the urethra on the following day. The patient enjoyed complete relief from all urinary symptoms afterward.

24 West Sixtieth St.

TRANSFUSION OF BLOOD IN A CASE OF PELLAGRA*

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Instructor in Gynecology, Medical Department of the University of Alabama
MOBILE, ALA.

Pellagra, a trophoneurotic disease now appearing in this portion of the country, possesses a high mortality rate in its acute type; 64 per cent. in the cases reported by Searcy.[1] Pellagra may probably be classed as one of the diseases caused by vegetable poisons, pellagrazein, a fatty oil or extractive so named by Lombroso. Pellagrazein is developed in fermenting and decomposing grain in the presence of a fungus. From the ingestion of this poison in corn meal the skin and nerve lesions characteristic of the disease result. As a rule there is associated with the disorder a pernicious dysentery probably of toxic origin. No cure has been found as yet.

For a more complete account of the disease the excellent articles by Bellamy,[2] Searcy,[1] Merrill[3] and that of Randolph[4] presented at this meeting may be consulted.

Considering the possibility that recovery from an attack of pellagra might produce a certain degree of immunity in the patient, the use of transfusion of blood from such a recovered patient in an acute case of pellagra suggested itself, as all medical means have failed in the treatment of this disease.

It is impossible to state the nature of the immunity until the etiology of the disease is definitely ascertained. If pellagrazein is the etiologic factor, the immunity may be of the nature of the antitoxin (antiricin) produced experimentally in lower animals against ricin.

To lend weight to any positive findings a recipient was found in such extreme condition that recovery was absolutely impossible in the opinion of one who has carefully followed all the cases of a large epidemic. To add further weight to the evidence, all medication was withdrawn after transfusion.

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* Synopsis of paper read before the Southern Medical Association at Atlanta, Ga., Nov. 12, 1908.

[1] Searcy, George H.: An Epidemic of Acute Pellagra, THE JOURNAL A. M. A., July 6, 1907, xlix, 37.

[2] Bellamy, R. Harllee: Pellagra: Its Occurrence in This Country: Report of Cases, THE JOURNAL A. M. A., Aug. 1, 1908, li, 397.

[3] Merrill, T. C.: A Sporadic Case Diagnosed as Pellagra, THE JOURNAL A. M. A., Sept. 14, 1907, xlix, 940.

[4] Randolph, James H.: Pellagra and Pellagrins; with Report of Cases, Arch. Int. Med., January, 1908.

The patient's extreme condition might best be shown when we state that she was one of two selected to be transfused, the two being in apparently the same condition, and that before transfusion and within four hours of selection one of the two died.

Recipient was a colored woman, aged 35. Symptoms of pellagra developed only three weeks before transfusion, Aug. 3, 1908. There was a rapid downward progress of the patient with marked loss of weight and strength. *At transfusion, the patient was unable to move her hands or head* from extreme asthenia; in fact deglutition and phonation were barely possible. No distinct blood changes other than a secondary anemia were observed.

The donor was a healthy negro woman, aged 36, who had recovered from a severe attack of pellagra in the fall of 1907.

Transfusion was performed by Crile's method, the blood flowing over from the donor to the recipient in a good stream for twenty minutes, when the donor gave signs of syncope. *The wounds were closed. Both patients left their tables in good condition.*

August 4: Twenty-four hours after transfusion the patient showed marked improvement mentally and in general condition.

August 7: Steady improvement continued; desquamation of the lesions was marked.

August 11: One week after transfusion the patient had steadily improved and walked about the ward.

There was marked gain in weight. The patient went on to a perfect recovery and to-day is about and in the same state of health as presented before the onset of the disease.

No definite conclusions from the recovery in this one case can be drawn, but we believe the coincidence to be very suggestive, considering the condition of the patient, the known inefficiency of medical therapy and the high mortality rate in this disease.

202 Conti Street.

Therapeutics

PLEURISY

The frequency of dry pleurisy during the progress of pulmonary tuberculosis is well understood, and even without definite lung lesions the cause is generally recognized and the patient consequently properly treated. Acute pleurisy with effusion, however, is all too frequently considered non-tuberculous and consequently the proper after-treatment of the disease is not carried out.

Physicians connected with sanatoria for the cure of tuberculosis will all attest to the great frequency of a pleurisy with effusion as preceding, by a longer or shorter length of time, a tuberculous outbreak in the lungs. It should also be stated that no condition of the lungs is so frequently entirely overlooked, or if diagnosed, improperly treated, as pleurisy with effusion. Case after case of a permanently adhesed lung with perhaps permanent cardiac displacement and with contraction of the chest, and a lower lobe of a lung that can never again be aërated, is constantly found by the lung specialist. *Even if the effusion is diagnosed* many a patient is told that it will gradually be absorbed, and he may even be sent into the country to rest and await its absorption, all to the permanent damage of that side of the chest. Consequently, in any pleurisy with effusion, whatever its origin, tuberculous or other, even if there is not much dyspnea or displacement of the heart, the fluid should be withdrawn if it progressively increases or if it remains several days without decreasing. It seems to be good judgement not to remove all such fluid, as the plastic serum which is in close contact with the pleural tissue apparently has the power to combat bacteria and bacterial poisons. In other words, this substance seems to contain an antitoxin, or the ability to cause antitoxin to be produced, and if it is removed the tissues become more susceptible to infection.

For the sake of a positive diagnosis of the cause of pleurisy a portion of the liquid withdrawn may be centrifuged and if tubercle bacilli are present they may be discovered. Generally, however, they are not so found even if tuberculosis is the cause of the pleurisy. A specimen of such withdrawn, settled and centrifuged, fluid which has not been allowed to become contaminated with other germs, may be injected into a guinea-pig or rabbit, and if tubercle bacilli are present the animal will show the disease in a certain number of weeks.

Another suggestive indication that the origin of a pleurisy is due to tuberculosis is that this centrifuged specimen of the lower stratum of the settled pleural fluid may show relatively a very large number of lymphocytes, while if the pleurisy has been caused by other infection the polymorphonuclear leucocytes are found in greatly increased numbers. Also presumptive evidence of the tuberculous or non-tuberculous origin of the pleurisy may be given by a differential blood count. If the polymorphonuclear leucocytes are relatively increased in number, the presumption is that the condition is not tuberculous but due to some other infection. If, on the other hand, the lymphocytes are relatively increased in number and the polymorphonuclear leucocytes are not increased, the cause of the pleurisy is probably tuberculosis.

Of course diagnostic tuberculin injections and tuberculin vaccinations may be done to prove or disprove that the patient is harboring a tuberculous focus. However, it is certainly supposable, and probably true, that a patient might have a healed or quiescent tubercular lesion somewhere in him, or a tubercular gland, that to all intents and purposes was walled off from the rest of the body and inactive, and that this could be lighted up by a tuberculin injection and cause a reaction, and yet his present pleurisy be non-tubercular in origin.

Consequently, with or without a positive diagnosis of a tuberculous focus, or that the pleurisy was due to tuberculosis, the clinical evidence that a pleurisy, tuberculous or non-tuberculous, predisposes to tuberculosis of the lungs, should cause the axioms of the treatment of pleurisy with effusion to be as follows:

1. With pain or without pain in the chest, with dyspnea or without dyspnea, with cough or without cough, when suspicion is attracted to the lungs of a patient a careful physical examination should be made with the chest and back completely bared.

2. If pleural effusion is found it should not be allowed to remain in the chest more than a few days, even if there is not much dyspnea and not much displacement of the heart, unless the amount of the fluid is small and this amount is gradually diminishing.

3. It is perhaps wise not to remove all the fluid, but if the fluid rapidly reaccumulates it should certainly be again withdrawn.

4. A patient who has had pleurisy with effusion and has apparently recovered should be treated as though he were in the pretuberculous stage of pulmonary tuberculosis; in other words, he should have a longer or shorter period of rest and fresh air treatment, if possible. If such rest, during this stage of suspicion, is

not a monetary possibility, his lungs and his general condition should be carefully examined at least once a month, for a year, before deciding that he is probably safe from tuberculous sequences.

GASTRIC ULCER

Dr. Delancy Rochester, Buffalo, N. Y. (*New York State Journal of Medicine,* April, 1908), believes that patients who have gastric ulcer are always more or less neurotic, as evidenced by headaches, neuralgias, nervousness and hysteria. He finds present in almost every patient with this trouble a disturbance of the lower bowel, either as constipation or a chronic diarrhea, "frequently of the mucous colitis type."

A sharp pain in the region of the stomach, or a pain burning or gnawing in character, often more aggravated when the stomach is empty, at other times the undigested food causing irritation sufficient to produce immediate vomiting and the signs of hyperchlorhydria (which is proved by analysis of the test breakfast), are all symptoms so well understood as to require no detailed description. While the vomiting of blood or the finding of blood in the stools (other causes of the latter having been excluded) is diagnostic, it is not always necessary for hemorrhage to be present in order to make a diagnosis.

In the treatment of hemorrhage of the stomach, of the greatest importance are physical and mental rest and functional rest for the stomach. In order to quiet the patient, Rochester administers a hypodermatic injection of morphin and atropin "in full dose." He adds the atropin to the injection to overcome the effect which morphin sometimes has of increasing the flow of gastric juice. Functional rest of the stomach is best obtained by withholding all food for a time. Sometimes, although he is not convinced of its utility, he applies a cold coil to the epigastrium. If the symptoms show that hemorrhage is persisting he gives 1 c.c. (15 minims) of a 1 to 1000 adrenalin chlorid solution in 30 c.c. (1 ounce) of distilled water, and follows this in half an hour by from 50 to 100 c.c. (about 2 or 3 ounces) of a 10 per cent. solution of sterile gelatin. He also has obtained good results from the administration of subgallate of bismuth suspended in a gelatin solution, or when hyperchlorhydria is very pronounced, suspended in milk of magnesia. Of course recurrent hemorrhage calls for surgical interference.

He would withhold food, ordinarily, from forty-eight to seventy-two hours, but if there is excessive hyperchlohydria as shown by severe pain, he would have recourse to immediate feeding of small quantities of milk, diluted with vichy or mixed with milk of magnesia or lime water. Sometimes he gives ice water in teaspoonful doses or allows pieces of ice to melt in the mouth.

During the first twenty-four hours he would not give food even by the rectum, as nutrient enemata have been shown to increase the flow of the gastric juice. The first enemata used should be normal salt solution, and later peptonized milk and egg may be used. These nutrient enemata should be given every six or eight hours, though a small amount of salt solution, 100 to 200 c.c., may be given by the rectum during the interval.

To cure the condition which he thinks caused the ulcer, he would investigate all reflex possibilities, believing that ulcers of the stomach may be brought about by a condition of nerve disturbance, due to nervous reflexes from the eyes, ears, nose, and throat, and to those from the gall bladder, rectum, and other abdominal and pelvic organs. He emphasizes the fact that eyestrain should be cured, and colon fermentation and putrefaction should be prevented, and any hygienic measure that will build up the general health of the patient will prevent the recurrence and promote the healing of an ulcer of the stomach.

As to diet, he would study each patient carefully and decide which particular foods were the best for that particular patient, of course "excluding all coarse-fibered vegetables and cereals, all highly-seasoned foods, fancy dishes, all salted and preserved meats and fish, and usually all soups made from meat stock." He would exclude "beers, ales, wines, and liquors of all sorts, and strong tea and strong coffee. Preserved fruits and pickles," he would exclude, but "fresh fruits, either raw or cooked," he would experiment with and see which caused disagreeable symptoms and which not. He recommends the drinking of a pint of pure water, or slightly alkaline water, or moderately carbonated water, with each meal, "as it dilutes and partially neutralizes the highly acid gastric juice. Gruels, milk, soups and other foods cooked with milk are useful." Cocoa not too sweet is useful. "White flour bread eaten with unsalted butter" he deems best. Meat should be eaten once daily, in the form "of beef, mutton or chicken." An egg or two once a day, with little or no salt, is advisable, and fresh fish may be taken occasionally. He would give the finer cereals, as "rice, sago, and tapioca (and macaroni cooked with milk), and would use plenty of cream, no salt, and little sugar." Baked and then thoroughly mashed potato, or creamed and then mashed he advises. Milk is, of course, the most valuable article of diet, but it should be diluted with alkaline water. Three or four hours after each meal he would have the patient drink a half pint of such diluted milk or milk porridge, sipped slowly, and taken pleasantly warm; not cold, not hot. The patient should take three meals a day, never overloading the stomach at one time, and not taking too great a variety of food at any one meal. He should eat slowly and chew thoroughly, and "not wash down half-chewed food with drink."

He relieves gastric irritation, flatulence and pain with:

℞.	gm. or c.c.		
Strontii bromidi	6		ʒi⅓
Sodii bicarbonatis	40		ʒix
Carbonis ligni	20	or	
Bismuthi subcarbonatis	20		āā, ʒivss
Lactis magnesiæ	200		fl.℥vi

M. et. Sig.: Two teaspoonfuls, in water, three times a day, after meals. [Shake well.]

If between meals there is burning or pain in the stomach due to hyperchlorhydria, Rochester gives a gastric sedative which he attributes to Stockton, viz.:

℞.	gm.		
Cerii oxalatis	10		ʒiiss
Bismuthi subcarbonatis	20	or	℥v
Magnesii oxidi	40		ʒx

M. et fac pulverem.

Sig.: A teaspoonful stirred in water, and repeat in an hour, if needed.

The milk of magnesia or the milk of bismuth will often act as well.

Ascites and Myocarditis.—P. H. Markley, in the *New York Medical Journal*, states that in uncomplicated myocarditis, be the heart ever so weak, there is no dropsy and rarely any edema. If, however, there is, in addition to the myocarditis, a defect of the valves, dropsy is almost certain.

DIRECT BACTERIAL TREATMENT OF THE COLON THROUGH THE VERMIFORM APPENDIX

CHARLES A. L. REED, M.D.
CINCINNATI

Patient.—Mr. N. P. S., American, aged 42, was sent to me Jan. 12, 1909, by Dr. E. W. Mitchell of this city, complaining of extremely severe recurrent attacks of mucous colitis, alternating with obstinate constipation.

Previous History.—In early childhood he had a supposedly tuberculous right hip joint which recovered after operation, leaving him with a shortened leg. He had no other illness from that time until 1893, when a persistent tendency to constipation culminated in an attack of mucous colitis. This condition became recurrent at intervals from and after that time and became likewise the conspicuous feature of an invalidism that not only interfered with his comfort but with his efficiency as a business man and which drove him in quest of relief to numerous physicians across the continent from Seattle to Philadelphia and back again. He developed headaches and became irritable and despondent, his nervousness manifesting itself at times in nocturnal emissions. He developed some rectal trouble for which a proctologist divulsed his sphincter ani muscle, another cut out some "pockets" and burned the places with silver nitrate. Then a surgeon had to excise some ulcers where the pockets had been. Then he had a course with high injections of iodoform, bismuth and olive oil. Then a genitourinary man told him that the whole mischief was urethro-prostate in origin for the relief of which he dilated the urethra, inserted cold sounds and washed out the bladder with ice water. Then somebody put him through a course of colonic lavage. At intervals between these special consultants he would drop back into the hands of medical attendants for the most part, who purged him for "intestinal indigestion" and gave him divers and sundry things for neurasthenia or sent him west to get well or die of "tuberculosis of the bowels." This went on until he sought Dr. E. W. Mitchell, who sent him to me, we being, respectively, the eighteenth and nineteenth on the list.

Examination.—Revealed a man of excellent physique, good nutrition, but with high arterial tension. The colonic areas were dull on percussion from the cecum to the sigmoid. There was slight gastric resonance. The rectum was normal except that there were a number of areas of cicatricial tissue. The elasticity of the sphincter ani muscle was normal. The genitourinary examination was negative in all particulars.

Diagnosis and Treatment.—After holding the case under observation for a week or more I told the patient that, in view of his past history and of the great diversity of treatment to which he had been subjected, I felt that an appendicostomy with such subsequent treatment of the colon as might be found expedient, would constitute a justifiable line of procedure. I explained to him that appendicostomy, surgically speaking, was no experiment and that in proper hands and under proper surroundings it was a safe operation. I made it clear, however, that the subsequent treatment, so far as final results were concerned, was experimental, but that the whole proposed line of treatment was both logical and safe and that after the immediately surgical period had been passed it would not interfere with his attention to his large business interests. He himself analyzed the proposition in the light of a very superior intelligence and at once embraced the suggestion as affording a possibility of escape from his long martyrdom.

The patient entered the Good Samaritan Hospital Annex January 22, after having had a week of diet of which the uncooked-whole wheat bread with buttermilk reinforced with lactéol (Boucard) were the leading features. These agencies had made no impression on the case. The colon was accordingly unloaded by high lavage and the patient was prepared for operation.

Operation (Jan. 25, 1909).—The technic was precisely the same as that for appendicitis, with the exception that the appendix was brought up and, instead of being excised, as usual was stitched into the wound and its extruded tip removed. This part of the proceedure was not easy in this case because, in addition to a somewhat elongated band that bound the cecum to the lateral parietal peritoneum I found a typical appendicitis obliterans. In other words the appendix, which was found buried beneath a blanket exudate that was so highly organized that it looked like normal peritoneum, was so atrophied that its lumen was obliterated in its entire length from the tip to within a little more than a quarter of an inch from its base. This stump was, however, used for fixation in the wound and through it a catheter was placed in the cecum and left in situ. The fixation of the bowel was, therefore, reinforced by a double row of sutures between the cecum and the parietal peritoneum. There was neither shock nor special discomfort following the operation and the patient's appetite scarcely faltered for a single meal.

Colonic Examination and Treatment.—January 28, the second day following the operation, steps were taken to determine the existing flora of the colon, by Dr. W. H. Strietmann of the bacteriologic department of the University of Cincinnati. Standardized bouillon and agar-agar were used and inoculations were made from the feces, both through the wound in the cecum and as they were discharged by the rectum. After the cultures were incubated plates were poured. In the meantime, after these first cultures had been started and awaiting their determination, the colon was thoroughly cleansed by injecting a dram of fluid extract of cascara with two ounces of sterilized glycerin through the tube into the cecum.

The effect was a thorough and painless evacuation of the colon and was realized within an hour after the injection into the cecum. This treatment was repeated on each of the two succeeding days, the object being not only to unload the colon, but to secure the exosmotic influence of the glycerin in reducing the presumably hypertrophied mucous follicles, and, likewise, to sweep out any adventitious and pathogenic bacteria that might be infesting the bowel.

By this time, however, the stab cultures started on January 28 and 29, were reported by Dr. Strietmann as showing no anaërobes, while the plates revealed only a pure culture of a bacillus with rounded ends, non-motile, which produced acid and gas and coagulated milk and was probably *Bacillus lactis aërogenes*.

Ten days later it was found that one of the plates revealed a single colony of *B. coli communis*. Later cultures modified this finding but slightly. Those from February 3 to 6 showed greenish coloration in the bouillon, while the hanging-drop revealed a motile bacillus and a non-motile one of different size. Agar plates showed the same green color and this same bacterium in gram positive. It was probably *B. pyocyaneus*, which may have reached the colon through the appendicostomy wound.

These revelations, indicating the practically complete absence of the usual flora of the colon, suggested a change of treatment. Milk cultures of the *B. lactis aërogenes*, *B. bulgaricus* and the *Streptococcus lacticus*, derived from lactic bacillary tablets (Fairchild) and from lactéol (Boucard) were accordingly thrown through the tube directly into the colon. This on two occasions was fortified with the *Saccharomyces cerevisiæ*. The results of this line of treatment, so far as re-establishing a resident flora of the colon is concerned, are being studied by Dr. Strietmann, by whom they will be embodied in a final report of the case.

Results.—The patient left the hospital February 13, experiencing not the least inconvenience from the tube, which he will probably wear for several months and which will not in the least interfere with his attention to business. The clinical results so far realized are disappearance of the mucous colitis, normal action of the bowels and disappearance of the previously almost constant headaches.

The case is reported in this preliminary way at this time with the hope that it may prompt similar experience at the hands of other operators followed by prompt reports of primary results and these, in turn, by full reports of end results.

A CASE OF MULTIPLE CYSTS OF THE MESENTERY

FRANK VAN DER BOGERT, M.D.

SCHENECTADY, N. Y.

In view of the present interest in cysts of the mesentery and in their origin, the following case is reported as it appears to be rather remarkable pathologically and belongs to a class few instances of which have been recorded:

Patient.—M. L., female, aged 5 years and 6 months, was born at full term, of apparently healthy parents, the labor being normal.

History.—There is said to have been great difficulty in obtaining the first movement from the bowels. The baby was fed at the breast for about nine months, and apparently suffered a great deal from colic, the attacks of which were said to have been quickly relieved by medicine given by the attending physician. She has always had more or less digestive trouble, accompanied by mild constipation for which castoria, cascara and aperient waters were given with relief. She was not given many enemata. The constipation was occasionally treated by equal parts of castor oil and sweet oil by the mouth. There is a history of irregular and improper feeding since infancy. She has always been a great eater of sweets and practically has been allowed to eat what she wished and when she wished it. The gastrointestinal symptoms were attributed to these causes. The child became nervous and irritable. About three years ago the abdomen was first noted to be distended, and has remained so since, the distention slowly increasing in amount. In April, 1906, when I first saw the child, I examined the urine. I have no record of the history on this date, but the examination was apparently made to determine the cause of enuresis which was not relieved. Recently, apparently, it was relieved by suggestive treatment applied during the summer by the father, who is a clergyman, having much faith in this mode of treatment. In the light of the later history, however, the effect of suggestion seems rather dubious. The treatment, however, though seeming to relieve the symptom, did not absolutely cure it, a relapse occurring later. In 1906 I saw her during an attack of urticaria, which was attributed to the general digestive disorder. The attack was chronic in nature and lasted for months. In May, 1907, I first noticed a slight umbilical hernia, and at this time the abdomen was markedly distended. The hernia had existed for some time prior to its being brought to my attention.

Examination.—In November, 1908, some time having elapsed since my last treatment, a large fluctuating tumor was noted in the lower right quadrant of the abdomen, but extending somewhat past the median line to the left. It did not reach above the umbilicus and extended to the pelvis. It was about the size of a fetal head or large grape fruit, and there was decided fluctuation, a most distinct wave being noted, the fluid apparently being contained in a very lax sack rather than under pressure. The abdomen at this time was very prominent and pendulous. A rectal examination was not made on account of the pain accompanying such a procedure, but the patient was catheterized prior to operation to eliminate the possibility of a distended bladder, I say possibility because the tumor was not in the *median line.* An absolute diagnosis was not made—the condition being noted simply as a cyst—ovarian or mesenteric in origin.

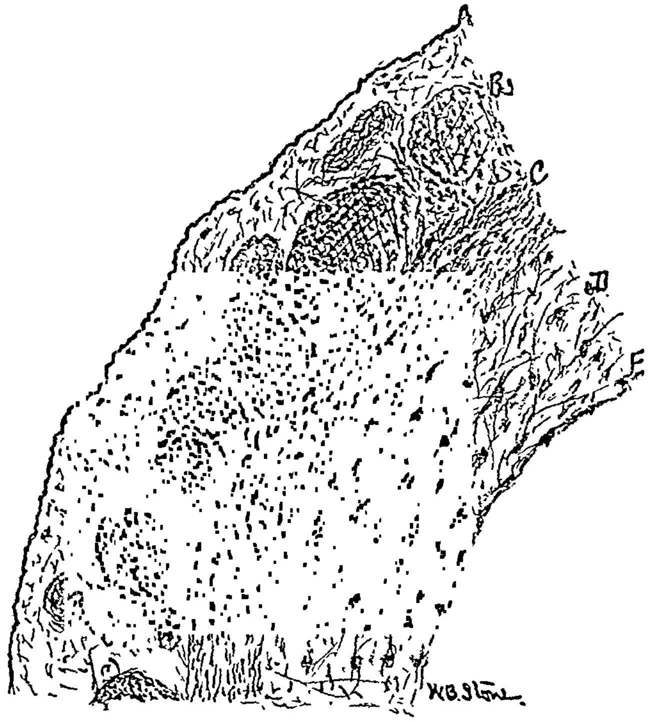
Operation.—On Nov. 28, 1908, the patient was *operated on* by Dr. William P. Faust. The abdomen was opened by the usual median incision. A large cyst about the size of a fetal head or about 18 cm. in longest diameter and containing a thin, blood-stained fluid was found a little to the right of the median line. Two cysts somewhat smaller than the first were delivered and evacuated, and found to contain about 1.5 liters of fluid. Several small cysts, about ten in all, were then emptied. All the cysts were found to have their origin in the mesentery of the ileum. There was no well-defined pedicle, the attachment being in the mesentery and extending along the intestine for a space of about 12 centimeters. The cysts were ligated with a lock stitch. Resection of the bowel was considered, but found unnecessary. The abdomen was closed without drainage and the patient made an uninterrupted recovery.

Unfortunately, through some misunderstanding, the fluid evacuated was not saved, so that there is no record of the chemical or microscopic examination of this fluid.

The pathology of the wall of the largest cyst was carefully studied by Dr. Warren B. Stone, pathologist to the Ellis Hospital, Schenectady, and his report follows:

The outer surface was smooth, glistening and purplish red in color. In three spots were punctate hemorrhages. The cyst wall varied in thickness from 2 to 4 millimeters. The inner surface of the cyst was smooth, and of a dull, white color. Several bands of rather dense fibrous tissue ran in different directions of the cyst wall, giving somewhat the appearance of a coarse network running through its structure.

Under the microscope the outer surface was seen to be covered with normal peritoneum. The subserous or connective tissue contained many congested blood vessels, and showed some round cell infiltration and a few small hemorrhages. The accompanying illustration shows the microscopic appearance.



A, outer layer of cyst wall; B, smooth muscle fibers cut transversely; C, smooth muscle fibers cut longitudinally; D, fibrous layer; E, inner layer of cyst wall.

Beneath the connective tissue were found many smooth muscle fibers arranged in bundles and forming two distinct layers running at right angles to each other. The arrangement being characteristic of the structure of the intestines. No epithelial lining was detected.

Judging from the characteristic appearances, the cyst is one of that rather rare variety, the origin of which has been attributed to the sequestration of the intestine during fetal life.

Dr. C. W. Dowd,[1] New York, has written a complete and comprehensive paper on mesenteric cysts and their origin, in which he describes cysts of this character and suggests their origin from the intestine.

The smaller cysts, had they been examined, might have shown characteristic epithelial lining. This examination, unfortunately, was not made.

111 Union Street

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[1] Ann. Surg., xxxii, No. 4.

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For other information see second page following reading matter]

SATURDAY, FEBRUARY 20, 1909

THE PRESENT STATUS OF THE WASSERMANN REACTION AS A DIAGNOSTIC AID IN SYPHILIS

The complement fixation test, the so-called Wassermann reaction, as applied to the diagnosis of syphilis has given rise to an immense amount of work. This has been partly critical. The great bulk of it, however, has been so strongly confirmatory as to leave no doubt as to the great practical importance of the method as a means of clinical diagnosis, provided its limitations are kept carefully in mind.

The method as first devised depends on the principle, formulated by Bordet and Gengou in 1901, of complement fixation by union of a given bacterial substance with the specific "antibodies" found in the blood serum of an infected animal. If, for example, to a properly prepared extract of typhoid bacilli (an antigen) a little blood serum of a rabbit immunized to typhoid be added, and then a little serum of any normal animal for complement, the mixture will combine with the complement and "fix" it. But if there be substituted for the immunized rabbit serum that of an animal not so treated, the complement will remain free, as it will if the extract of any bacillus except typhoid be used. Hence, having a known extract, or a known serum, it may be possible to identify the immune bodies (antibodies) or bacterial substances in an unknown mixture by demonstrating fixation of complement.

The presence of free complement in such a mixture is determined in the following manner: The blood serum of a rabbit which has been injected with the blood of a sheep acquires the power of dissolving the red corpuscles of the sheep. But it can do this only when free complement is present. If the hemolytic serum be heated so that its complement is destroyed, it will not dissolve the corpuscles until free complement is added from some other source. Hence, by adding to such a mixture of fresh corpuscles and heated immune rabbit serum a solution containing complement, it can be determined whether in this solution the complement is free or fixed by observing the occurrence or nonoccurrence of hemolysis.

In applying the test to the diagnosis of syphilis, a bacterial extract can not be obtained directly, so an extract of the liver of a syphilitic fetus is used instead, and the blood serum of the patient in which the presence of syphilitic antibodies is suspected is mixed with it. Since the first observations were made it has been found that such serums containing antibodies for syphilis will bind complement when mixed with extracts of normal tissues in larger quantities, or even with solutions of lecithin or bile salts. Hence the biologic specificity of the reaction has been disputed. This does not, however, impair the clinical value of the test, as only sera from syphilitic patients yield the reaction.

Unfortunately, the technic of the reaction is complicated. Every step in the test has to be very carefully controlled, and at present it is impracticable, except in well-equipped laboratories and in the hands of experienced workers.

Statistics of a large number of cases in which the reaction has been clinically applied are now available. In testing for antibodies it is very rare that positive reactions are obtained when syphilis can be excluded with reasonable certainty. In cases clinically syphilitic the percentage of positive reactions is in the primary stage from 40 to 60 per cent., in the secondary stage from 70 to 90 per cent., in the tertiary stage from 50 to 90 per cent. The reaction often ceases to be positive under mercurial treatment. A positive reaction tells us that syphilitic infection has been present, but it appears to be no indication of the necessity for treatment nor of the activity of the disease. A positive reaction is yielded by the serum and the spinal fluid of subjects with tabes and general paresis in from 60 to 80 per cent. of the cases.

Attempts to demonstrate the presence of the syphilitic poison itself, the antigen, have been made but have not been followed by constant results.

Positive complement fixation reactions have been reported in a few non-syphilitic conditions, notably in infections with certain protozoa (yaws and trypanosome infections). Several observers have reported positive reactions in cases of scarlet fever. A few cases are on record in which it occurred in cases of great emaciation, as in carcinoma, pyemia and tuberculosis.

In cases uncertain clinically a positive reaction obtained under proper controls is very strong evidence of the pre-existence of syphilis. After syphilitic infection a positive reaction can be obtained, as the above statistics show, in from one-half to three-fourths of the cases. A negative reaction, it should be kept in mind, does not exclude syphilis.

INTERNAL CANCER AND CHRONIC TRAUMA

Although we have no inconsiderable number of articles in the literature bearing on the relation of trauma to tumor formation, a common defect is that the amount of material on which conclusions are based is not sufficiently large to give valuable results. With the enormous material of Vienna at his disposal, however, Haberfeld[1] has been able to examine a sufficient number of cases of cancer to entitle his figures to respectful consideration. His investigations concern only the cases of carcinoma of the stomach, the gall tracts and the lungs, and, in his opinion, the results are emphatically in support of the view that, at least in these three organs, chronic trauma is a most important predisposing cause of cancer.

Since Rokitansky first directed attention to the relation of gastric ulcer to gastric cancer, both clinicians and pathologists have given this subject much consideration, and, while clinical experience has spoken decidedly in the affirmative, conclusive proof seems to be lacking from the anatomic side. This seems now to be satisfactorily supplied, for of the 662 cases of cancer of the stomach occurring in Haberfeld's series of 20,000 autopsies no less than 106, or 16 per cent., showed macroscopic evidence of having originated in round ulcer of the stomach, which, in view of the impossibility of telling anything about the place of origin of many advanced ulcerating carcinomas, is undoubtedly much below the actual proportion. Additional evidence of this relationship is furnished by the tables of distribution of carcinoma and ulcer in different parts of the stomach, for the correspondence of frequency is very striking. The current opinion that carcinoma of the stomach is much more common in men while ulcer prevails in women is confuted by this large series of autopsies, in which there seems to be really but little difference between the two sexes in respect to either of these lesions.

Even more distinct is the relationship between the concurrence of gallstones and carcinoma of the gall tracts. In the 20,000 autopsies under consideration there were no less than 164 cases in which biliary tract carcinoma was the cause of death, and in 119 of these (73 per cent.) gallstones were present. High as this proportion seems, it is even less than that reported by some other statisticians. Here also collateral evidence is at hand, consisting in the fact that there is exactly the same predominance of cancer of the gall tracts in women, 73 per cent. of all cases, as there is of gallstones, in the same series of autopsies, which yielded 265 cases of cholelithiasis, of which 195, or 73 per cent., were in women. A question that has been always raised whenever the relationship of gallstones to cancer is under discussion is whether the gallstones are not secondary to the cancer rather than the predisposing cause of the malignant growths. This would seem to be settled in the negative by Seigert's observation that, whereas in a series of 99 cases of primary carcinoma of the gall bladder, stones were present in no less than 95, yet in 13 cases in which the gall-bladder cancer was secondary to a growth in some other organ stones were found only twice.

In the cases of carcinoma of the lungs, chronic irritation was found to play a similar, if less striking rôle, the evidence being more difficult to collect and interpret. Haberfeld found 68 cases of primary lung cancer in a series of 40,000 autopsies, which will probably seem a remarkably large number in view of current ideas concerning the rarity of primary tumors of the lungs. The pathologists, however, appreciate that these figures are not exceptional, knowing that lung tumors are most commonly found at autopsy without their having been recognized during life. As evidence that lung tumors also may be incited by chronic trauma, we have the following facts: The starting point of these tumors is predominatingly in the right lung, and chiefly in the main bronchus, which may be correlated with the fact that the right bronchus is most subject to injury by dust and other foreign materials by reason of its more direct continuation from the trachea and its larger size. Cancer of the lung is far more common in men than in women, probably at least three to one, which harmonizes with the fact that men are more exposed to bronchial irritation by reason of their occupations and habits. Histologically, it is found that pulmonary cancer is frequently a squamous-cell carcinoma, which is explained by the fact that under the influence of chronic irritation the cylindrical epithelium of the bronchi becomes transformed into the protective, squamous-cell type of epithelium, from which, in turn, squamous-cell carcinoma may arise if the irritation continues.

While none of the above facts taken singly would constitute a sufficient proof of the dependence of lung cancer on chronic trauma, yet taken together they certainly establish a strong case.

SOME NEEDS IN THE FIGHT AGAINST TUBERCULOSIS

Even the most optimistic among us, and those who are most encouraged by the results so far obtained in the prevention of tuberculosis, realize that as yet we have invaded only the confines of the territory to be conquered. When one reads of antituberculosis societies, sanatoria, dispensaries, and classes, an impression of the magnitude of our armament in the struggle against tuberculosis is gained which is misleading to those who are not in actual contact with the work. It is certainly not realized as yet by the public, and probably not understood by many physicians, that in the average large city of to-day the patient with advanced tuberculosis is almost an outcast. The sanatoria, naturally enough, desire to receive only patients who have the disease in a stage early enough to permit of probable recovery. The general hospitals, on the other hand, properly object to placing patients with advanced tuberculosis in the wards, as, no matter what precautions may be taken, the ignorant and filthy among consumptives are a constant menace to their neighbors, and should not under any circumstances be confined in a ward with patients suffering with or convalescing from non-tuberculous diseases of the respiratory tract. A few general hospitals have special wards for tuberculous patients, but even then the number of beds available for these patients is often as the proverbial drop in the bucket. It is apparent to all city dwellers who are cognizant of the situation that one of the greatest needs of most cities, so far as the tuberculosis problem is concerned, is hospitals. or special wards, for the reception and care of advanced cases of pulmonary and other grossly infective forms of tuberculosis, and this is especially the case because in the advanced stages enormous numbers of bacilli are often excreted.

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[1] Zur Statistik und Ætiologie des Carcinoms des Magens, der Gallenwege und Bronchien. Ztschr. f. Krebsforsch., 1908, vii, 190.

There is another aspect of the problem which as yet has not received sufficient attention. The specialists in tuberculosis, mostly sanitarium physicians, cry out for early cases, claiming that the recognition of the disease in its incipiency is rare, and usually casting the blame on the general practitioner, whose feeble diagnostic acumen they deplore. We can not pretend that all practitioners of medicine are experts in the early diagnosis of phthisis. Still, in all fairness, it is necessary to state that the fault is often not theirs at all, but lies with the patient. Too often the tuberculous among the working classes ignore their symptoms until the disease is so far advanced that even the tyro can diagnose it, and the failure to make early diagnoses is as often, perhaps more often, due to this factor than to careless examinations and poor diagnosis on the part of the practitioner.

To put the matter in another form: it is now evident that if we are to stamp out tuberculosis we can not rely on patients seeking us, but must institute an active campaign having for its object the detection of those tuberculous individuals who from ignorance or indolence have failed to seek the advice of a physician. This has been done to some extent by those doing the house-to-house work of antituberculosis dispensaries. The families of the patients with tuberculosis who visit the clinics are inspected now in several cities, and these examinations have shown in many instances widespread family infections where only one member, perhaps, had symptoms that compelled a visit to the physician. This work, while of the greatest possible importance, still leaves untouched those who have not applied for treatment and who are often equally dangerous to their families and associates. Fulton's[1] work in Providence indicates another point of attack, and shows that the owners and operators of mills and factories may be led to realize the industrial importance of tuberculosis, and may be willing to combine and give active support to those fighting the disease. The extension of the antituberculosis crusade to factories may be regarded as an important step, since it brings the subject prominently before both employers and employed. The work should certainly be extended, and should become as much a part of factory administration as the medical inspection of schools in many cities has become a part of school administration.

THE EMMANUEL MOVEMENT AS SEEN BY A CLERGYMAN

The most recent invasion of the field of medical practice is found in the widespread adoption of the Emmanuel movement by ministers and religious teachers of various denominations. An unusually timely and rational estimate of this movement from the standpoint of the clergyman is an article by Rev. George A. Gordon in the *Congregationalist* for February 13, under the title "The Practice of Medicine by the Unfit." Dr. Gordon defines the practice of medicine as "the treatment of human beings, in a pathologic condition, as the subjects of physical disorders and diseases."

After relating his experience with Eddyism and emphasizing the utter ignorance of the followers of this cult of even the elementary facts of anatomy and physiology, Dr. Gordon says: "The most recent phenomenon is the emergence of the preacher of religion as a medical practitioner, his wizard wand being psychic force. Here again the interest is great and generally the motive of the healer is pure. Disease abounds; the mystery of pain is widespread; suffering is one of the horrors of existence. The forces at work for cure, relief, mitigation, noble and efficient as they are, manifestly are unequal to the need. Can we not invent some new therapeutic agent that will work wonders, that will change like the rising sun, night into day? Just at this point the delusion of the religious healer becomes plausible." The fact that the principles taught as new discoveries are in reality as old as human relations is then clearly brought out. "That psychic force is a healing agent no man will deny. . . . The personality of a vigorous, wise, humorous, sympathetic and noble human being, in any vocation, is a distinct influence for health in the community in which he lives. . . . But is not all this as old as the relation of parent and child, teacher and pupil, prophet and people? . . . Have not all wise preachers in all generations always done the attainable service which these psychotherapeutists have turned into a cult? . . The psychic treatment of disease is apt to become a craze. An auxiliary force strictly limited in availability and always requiring for its use a level head is turned into a panacea in cases that call for a scientific physician. In pathology we enter the domain of a disordered or diseased physical organism. No man has the least moral right in this domain but one scientifically competent. . . . I do not know a single member of my profession who could pass a first year's examination in any reputable medical school in the country." After carefully considering and enumerating the large amount of work and training that enters into the preparation of the modern, educated physician, Dr. Gordon says regarding the monstrous confidence with which persons, largely without knowledge and with no special training, rush in as healers that "they are monumental examples of the 'blind persistent courage of the book agent.'"

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[1] The Detection and Treatment of Cases of Tuberculosis Among Factory Employés Read at the Third Annual Meeting of the National Association for the Study and Prevention of Tuberculosis.

Looking at the movement from the point of view of the clergyman, Dr. Gordon finds the situation unfortunate in that the minister, when he becomes a healer, abandons the calling for which he has been specially trained to take up a work for which he has no training and no ascertained ability and which he can not by any possibility do well. The resulting confusion he considers unfortunate from the viewpoint of the patient, since it leads him to underestimate the value of the services of a true expert; turns him away from the only true source of relief, namely, scientifically qualified men; and raises in him false expectations and superstitious feeling. The church, he concludes, also suffers. "A hospital is one of the most benign of all the institutions created by man, but a hospital is not a church. . . . The mission of the church is not primarily to the sick but to the well. . . . Its chief mission is to the strong that they may secure justice and mercy." Reviewing the value of churches as moral and philanthropic agents in a community, he says: "Turn now any strong church into a sanitarium for those who are really ill and for those who only think they are ill and you bereave the ideal causes of a community in a cruel manner." "Hence," he concludes, "let the church and the hospital continue as separate institutions; let the people in the church continue under the care of the preacher and those in the hospital under the care of the physician, and let the master spirit in each call on the service of the other in time of need."

Dr. Gordon's discussion of this movement is remarkably sane. His closing paragraph can be commended to the careful consideration of all enthusiasts and faddists who aspire to assume, without preparation, the work which is being done painstakingly and with constantly increasing efficiency by men who have devoted their lives to preparation for it. "The ideal of knowledge is infinite; the attainment, the perfection of specialists has a clear and pathetic limit. It remains for the individual man to do the small bit of work for which he is fitted; to let religiously alone the work for which he is manifestly unfit, and to bear in mind that about the best thing that good men can do for the noblest causes is to go through the world with a level head."

DIRECT BACTERIAL TREATMENT OF THE COLON THROUGH THE VERMIFORM APPENDIX

The preliminary report of a case under this caption in this issue[1] is of interest, not only on account of the fact that the bacteriology of the alimentary tract is now much to the fore, but because of the results realized in this case and the possibilities, both in a scientific and therapeutic way, that are suggested by the procedure. The normal flora of the colon has never yet been studied with a definiteness that is more than suggestive. The relation of flora to function of the colon is not yet determined. The influence, inhibitory or otherwise, of the alimentary secretions on various micro-organisms remains to be determined in their natural position. The possibility of replacing one flora with another and the results of such a change on the health of the patient are entirely undetermined questions. Some new light may be thrown on the mode of operation of cathartics and of intestinal antiseptics so far as they influence the micro-organisms, benign or pathogenic, as they are found in the alimentary canal. In the determination of these questions there is an obvious advantage in having access, for a prolonged period, to the head of the colon, particularly when such access can be had without interfering with the patient's usual daily activities.

PRESERVATIVES AND PURE FOODS

The question as to whether the use of benzoate of soda in particular, and chemical preservatives in general, is necessary in putting up food products has been answered in a most practical and unequivocal manner by the recent convention at New York City of the American Association for the promotion of Purity in Food Products. The object of this organization of manufacturers is to educate the public to the fact that chemical preservatives are absolutely unnecessary in the preparation of food products. In a resolution adopted by this association and sent to President Roosevelt, the following statements occur:

> As practical manufacturers, we know that artificial preservatives of any kind are unnecessary to the successful commercial preparation of good, sound, raw materials, under proper sanitary conditions. . . .
>
> The use of artificial preservatives makes possible and invites the employment of inferior and waste materials often unfit for human consumption and careless methods and insanitary conditions in food preparations.

Such statements as these, coming from men of practical experience, are deserving of most careful consideration. It means that these men, actuated by enlightened self-interest, see that the "penny-wise pound-foolish" attitude of the reactionary food manufacturers in the long run will prove disastrous. If the adulterating manufacturers have their way, though it may result in larger dividends for a time — at the expense of public health—in the long run it "will not only cause in itself irreparable injury to the reputation and standing of the legitimate food-producing interests of the country, but will cause a great industry to revert to the deplorable state existing prior to the enactment of a national food law, to its great disparagement both at home and abroad." As these progressive manufacturers are carrying on a forceful and educative advertising campaign, doubtless it will not be long before the public is fully awake to what the legend, "contains one-tenth of 1 per cent. of benzoate of soda," means. If, therefore, it is possible so to prevent the emasculation of the national Food and Drugs Act that the legend must continue to appear on the labels of preparations containing this chemical, the question may solve itself. On the other hand, if the "interests" at work against the pure food law and against Dr. Wiley are able to force the removal of the legend, the cause of decency and honesty in the manufacture of food products will suffer well-nigh irreparable injury.

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[1] The Journal A. M. A., Feb. 20, 1909, p. 636.

Medical News

ILLINOIS

Personal.—Dr. Robert Dayton Luster, formerly of Granite City, has returned from abroad.——Dr. Philip H. Hesse, interne at the Illinois Northern Hospital for the Insane, Elgin, has resigned.——Dr. Albyn L. Adams, Jacksonville, vice-president of the trustees of the Passavant Hospital, has resigned.

Officers Elected.—At the annual meeting of Brainerd District Medical Society, held at Petersburg, January 28, Dr. John M. Wilcox, Clinton, was elected president; Dr. Don W. Deal, Springfield, vice-president, and Dr. Harry S. Oyler, Lincoln, secretary. The next meeting of the society will be held in April at Lincoln.——The Danville Physicians' Club, recently organized, has elected the following officers: President, Dr. Charles E. Wilkinson: vice-president, Dr. A. Merrill Miller, and secretary-treasurer, Dr. Benjamin Gleeson.

Chicago

Personal.—Dr. and Mrs. Alexander H. Ferguson are visiting their old home in Winnipeg, where Dr. Ferguson is to address the alumni of the Medical Department of the University of Manitoba.——Dr. and Mrs. Milton K. Eisenstadt have returned from Europe.

Health of Chicago Better.—There were 107 fewer deaths during the week just closed than in the corresponding week of last year. There were 52 fewer deaths from pneumonia, 23 fewer from influenza, 18 fewer from bronchitis, 6 fewer from tuberculosis, and 9 fewer from the acute contagious diseases. There was a marked decrease in the cases of diphtheria, scarlet fever and measles, but an increase was noted in the cases of typhoid fever. To the total of 827 cases of communicable diseases reported during the week, diphtheria contributed 145, scarlet fever 142, tuberculosis 109, measles 107, chickenpox and typhoid fever, each, 90, pneumonia 66, whooping cough 30, and diseases of minor importance 48.

INDIANA

Personal.—Dr. Perry Woolery and family have gone to Asheville, N. C., for the remainder of the winter.——Dr. James E. Donnelly has resigned from the staff of Union Hospital, Terre Haute.

Work of Physicians' Club.—The Physicians' Club of Elwood, which was organized eighteen months ago for mutual protection, reports that it has collected $1,100 in accounts previously supposed to be worthless. The postgraduate work outlined in The Journal is being discussed regularly. The club has been awarded the contract for the charity practice of the city, and with the $150 per annum received from this source proposes to start a medical library.

MARYLAND

Society Meeting.—At the annual meeting of the Anne-Arundel County Medical Society, held in Annapolis, February 9, the following officers were elected: President, Dr. Thomas H. Brayshaw, Glen Burnie; vice-president, Dr. J. Oliver Purvis, Annapolis; secretary, Dr. Louis B. Henkel, Annapolis; treasurer, Dr. Frank H. Thompson, Annapolis; delegate to the Medical and Chirurgical Faculty of Maryland, Dr. Charles R. Winterson, Hanover; alternate, Dr. Samuel H. Anderson, Woodwardville, and censors, Dr. Thomas H. Brayshaw, Glen Burnie, James S. Billingslea, Armiger, and Oscar H. McNemar.

Profession Opposes Nolle Pros.—Dr. James B. Merritt, Easton, indicted by the grand jury for an alleged criminal operation, and said to be under $5,000 bail, has applied to the governor for a write of *nolle prosequie*. The indictment also alleged that false death certificate, "typhoid fever and perforation of the bowels," had been made in the case. When this matter came to light, Dr. Merritt is said to have disappeared and to have been in hiding for several weeks. Nearly 1,000 names have been signed to his petition. The medical profession has now taken up the matter and declares it involves the honor of the profession and the inviolability of the laws.

Baltimore

Refused License to Practice.—Dr. Henry H. Hazen, who is said to have been refused a license to practice in the District of Columbia, is reported to have applied for a mandamus against the medical board there. It is stated that Dr. Hazen's period of practice in Baltimore did not amount to the two years required to obtain reciprocity benefits.

Vienna Professor in Baltimore.—Dr. Clemens von Pirquet, formerly assistant in pediatrics in the clinic of Prof. von Escherich and *privat-docent* in the University of Vienna, has arrived in Baltimore to take charge of the Harriet Lane Johnson Home for Invalid Children connected with Johns Hopkins Hospital, and to be professor of pediatrics in the university.

Hospital Report.—The annual report of the Johns Hopkins Hospital trustees shows that during the year 4,609 patients were admitted, making the total number of inmates 4,912. There were 219 births, 3,607 patients were discharged improved or well, 148 were discharged unimproved, 395 were not treated, and 196 were transferred to other departments. Two nurses visited 2,480 tuberculosis patients at their homes, and other nurses visited the homes of 1,298 children.

MICHIGAN

Personal.—Dr. Edwin L. Thirlby, Traverse City, has returned from Europe.——The house of Dr. Hugh M. Gale, Bay City, was burned January 19, with a loss of $2,000, partially covered by insurance.——Dr. James Ardiel, Grand Rapids, is said to have been committed to the State Hospital for the Insane, January 11.

Communicable Diseases.—During December, pneumonia, typhoid fever, diphtheria, meningitis, scarlet fever, measles and smallpox were less prevalent than for the average of the month in recent years. More cases of, and more deaths from, tuberculosis than the average were reported, and whooping cough was more prevalent than the average for the month.

The Conflict Against Tuberculosis.—Secretary Shumway of the State Board of Health is endeavoring to secure the passage by the legislature of a law prohibiting expectoration in railway stations, public places and public conveyances.——The new shack of the tuberculosis colony at Kalamazoo, was dedicated January 21.——The Upper Peninsula Society for the Cure of and Prevention of Spread of Tuberculosis and Other Contagious Diseases, at its meeting in Marquette, January 12, adopted resolutions urging senators and representatives from the upper peninsula to have laws enacted for the establishment of a sanatorium for tuberculosis in that part of the state.

MINNESOTA

License Revoked.—The State Board of Medical Examiners, on January 15, is said to have revoked the license of Dr. A. C. Moorhead, Minneapolis.

New Medical Society.—The Swedish Medical Society of Minneapolis, which was recently organized with the following officers, Dr. Carl J. Ringnell, president; Dr. Axel E. Hedback, vice-president; Dr. Gilbert Seashore, secretary, and Dr. Olaf A. Olson, treasurer, held its first annual banquet January 30. Dr. Carl J. Ringnell presided as toastmaster.

Bill Against Objectionable Advertising Passed.—The house of representatives, on February 2, passed a bill prohibiting the advertising or distribution of printed matter relating to so-called medical institutes. Violation of the law is made a misdemeanor, and both newspapers and advertisers are amenable to imprisonment or fine or both, at the discretion of the court. The distribution of such advertising matter in the form of pamphlets or circulars is also forbidden.

Personal.—Dr. William F. C. Heise, Winona, has been reelected physician of Winona county.——Dr. Frederick E. Haines has been appointed chief medical inspector and quarantine physician; Drs. H. Journeay Wells, Glen Matchen, and Harry M. Guilford, medical inspectors; J. Frank Corbett, bacteriologist, and Dr. Elizabeth Woodworth, assistant bacteriologist, of Minneapolis.——Dr. Edward L. Tuohy, Duluth, has been appointed health officer of St. Louis county.——Dr. John M. Edwards, Mankato, is ill with an infection of the arm.

MISSISSIPPI

Coming Meeting.—The annual convention of the Mississippi Medical Association will be held in Jackson April 13-15, under the presidency of Dr. James W. Gray, Clarksdale. The meeting will be of exceptional local interest because it is expected that a resolution will again be adopted urging the legislature to establish a state charity hospital in Jackson.

Personal.—Dr. Joseph W. Crumpton, Starkville, has been appointed a member of the State Board of Health, vice Dr. T. S. Richardson, deceased.——Dr. Hollie B. Wilson, Vicksburg, has been elected physician of Warren county.——Dr. Fred Meyer, sanitary lecturer for the State Board of Health, is making a tour of the state delivering popular lectures on sanitary affairs.——Dr. W. R. Thames, Hattiesburg, has been appointed physician of Perry county.

MISSOURI

Personal.—Dr. James A. Waterman, Breckenridge, has been appointed prison physician at the state penitentiary.——Dr. M. Wiley, of Springfield, while attempting to board a street car, was thrown to the ground and painfully injured.

Smallpox in College.—An epidemic of smallpox has broken out in William Jewell College, at Liberty, where 35 cases are said to be found. Although the 600 students were vaccinated on the discovery of the first cases on February 8, it has now become necessary to quarantine the institution.

Academy of Medicine Organized.—St. Joseph physicians organized an Academy of Medicine February 3 for the purpose of devoting special attention to experimentation and investigation along advanced medical lines. The officers are: President, Dr. O. Beverly Campbell; vice-president, Dr. Albert L. Gray, and secretary, Dr. John M. Bell.

Tuberculosis Exhibit.—Jackson County Society for the Relief and Prevention of Tuberculosis has completed preparations for a tuberculosis exhibit at Kansas City, beginning February 15 and continuing for two weeks. There will be meetings every noon and evening and lectures by prominent workers in the fight against tuberculosis.

Lectures to Students on Medical Organization.—Dr. Alonzo R. Kieffer, president of the State Medical Association, has appointed the following members to lecture to the senior classes in the medical colleges on the subject of medical organization: Drs. William G. Moore, St. Louis; William F. Kuhn, St. Joseph; Jefferson D. Griffith, Kansas City; and John Duncan, Columbia. It is hoped that many students will be induced to join the organized medical societies in the counties in which they locate after graduation.

St. Louis

Medical Inspection of Schools.—The board of education is perfecting plans for the establishment of a system of medical inspection of school children. Five school districts, comprising twenty-one schools, will be inspected. The appointment of inspectors will be by competitive examination. There will be one supervisor of inspection and as many inspectors as may be required to execute the duties of the department. The salary of the supervisor will be $2.500 and the salary of the inspectors will be $1,200 per annum. The superintendent has also recommended that a bacteriologic laboratory be established under the control of the board of education.

Physicians on Board of Freeholders.—The recent passage by the municipal assembly of the bill authorizing the election of thirteen freeholders to frame a new charter for the city is of great interest to the local profession inasmuch as there is now an opportunity of securing greatly needed reforms in the system of control and management of the municipal hospitals through provisions in a new charter. On invitation of the joint medical council representatives of eleven different medical and dental societies met February 13 and decided to present the names of the following four physicians to the various political parties as candidates for freeholders: Drs. John C. Morfit, George Homan, John Green, Jr., and William G. Moore.

NEW YORK

Correction.—The superintendent of Albany Hospital states that the item regarding the needs of the institution, which appeared in The Journal of February 6, is incorrect, in that the hospital is not in debt, the $45.000 debt having been cleared by popular subscription and $9,249 in addition having been received.

Vital Statistics.—The total number of births recorded in 1908 was 203,159, as against 195,735 in 1907. The total number of deaths from tuberculosis was 16.521, or 11.9 per cent. of the total mortality. From typhoid fever there were 1.368 deaths and from pneumonia 8,602, a decrease of 2,412 from the total of 1907.

To Shorten Course for Doctors.—Representatives of twenty-four colleges in the state February 9 conferred with State Education Commissioner Andrew S. Draper, regarding a change in the present rule of the board of regents requiring a seven-year course for the combined degrees of A.B. and M.D. It has been suggested that the term required for such degrees be reduced to six years. The regents will act at a future meeting.

Smallpox Bill Disputed.—The trustees of the village of Matteawan have appealed to the Appellate Court from the judgment rendered Dr. Howell S. Bontecue for services in attending smallpox cases last spring while health officer of the village. The health officers claimed $10 a day for treating single cases and $25 a day when several cases were treated. The trustees refused to pay the claim and would allow but $150.

Proposed Increase of Pay.—The new schedule for increased compensation of physicians of the staffs of the state hospitals has been adopted by the State Commission in Lunacy. This schedule provides for an increase of 25 per cent. in the salaries paid superintendents and assistants of various grades, including medical internes. About 130 will be affected by the proposed change, which will involve an increased annual outlay by the state of $160.000.

Long Island Physicians Meet.—At the eleventh annual meeting of the Associated Physicians of Long Island, held in Brooklyn January 30, three interesting papers on "Tuberculosis" were read: Dr. Livingston Ferrand described the organized campaign against tuberculosis. Commissioner Hibbard detailed what Greater New York was doing and proposed to do with the tuberculosis problem, and Dr. James Jenkins told of the work being done by the Board of Brooklyn Charities in helping to aid and instruct the public in the prevention and cure of tuberculosis. The following officers were elected: President, Dr. Frank T. DeLano, Rockville Center; vice-presidents, Drs. Thomas R. French, Brooklyn; Frank Overton, Patchogue, and William B. Brinsmade, Brooklyn; secretary, Dr. James C. Hancock, Brooklyn, and treasurer, Dr. Charles B. Bacon, Brooklyn.

New York City

Spitters Arrested.—In one day about 200 men were arrested for violating the anti-spitting ordinance by the policemen attached to the Health Department in subway and elevated stations. Most of these spitters were fined and between $300 and $400 was added to the pension fund of the department. The fines varied from fifty cents to $3.

Plan Another Hospital.—Well-known women have undertaken the work of building a non-sectarian hospital in Second avenue between Twelfth and Thirteenth streets and a fair for its benefit, which will be opened by President Roosevelt, will be given February 20 in the Twenty-Second Regiment Armory. Governor Hughes will also deliver an address. The institution will be known as the People's Hospital.

Hospital Will Move.—Deeds have been signed by which the new site for the Presbyterian Hospital selected by the late Dr. Andrew J. McCosh has passed into the hands of the corporation. The new hospital will be built on the block bounded by 67th and 68th streets, the East River and Avenue A. The cost of the land was about $500.000. The trustees have long desired to move the hospital to a neighborhood where it could be in close touch with the poor and of greater usefulness through its daily free clinics. Work on the new hospital will be begun some time in May, 1910. The fund now on hand includes $1,000,000 given by John S. Kennedy and $100,000 that has been obtained during the past month for the Dr. McCosh Memorial fund, with which it is planned to build a surgical pavilion. The site of the present hospital will be sold and the funds thus obtained will be used in the new building. Last year the ambulances from the Presbyterian Hospital responded to 3,479 calls. There were 43,220 persons who received benefits from the hospital; 3,536 occupied beds, and of these 65 per cent. were free patients.

NORTH DAKOTA

Physician Acquitted.—Dr. James J. Reilly, Milton, charged with performing a criminal operation on a woman of Park River, has been discharged from custody. The judge claimed that the evidence introduced by the state was insufficient to warrant holding the defendant to the district court.

Bills Against Tuberculosis.—The legislative committee of the State Medical Association, of which Dr. John D. Taylor, Grand Forks, is chairman, has under consideration bills embodying the following principles: That the appropriation for the use of the department of health should be at least $7,000 a year, to make it possible for that department to carry on an aggressive policy along sanitary lines; that it be made mandatory for attending physicians to report to the state health department all cases of tuberculosis coming within their knowledge, that the person infected may be supplied with information relative to the best method for the cure of the disease and the precaution necessary to take to avoid the infection of others; that spitting on sidewalks, floors, public buildings and public conveyances be declared a public nuisance, punishable on conviction by a fine of not less than $5 or more than $50. or by imprisonment in the county jail, not to exceed thirty days. or both; and that suitable and sufficient sanatoria be established and maintained at proper and desirable locations within the state and at its expense, where approved methods for the treatment of tuberculosis can be applied.

PENNSYLVANIA

Filtered Water for Pittsburg.—On February 4, the filtered water was turned into the system pipes on the south side of Pittsburg, and that section is now supplied from the filtration plant and Highland reservoir.

Tuberculosis Exhibition to Be Sent Around the State.—The Pennsylvania Society for the Prevention of Tuberculosis has decided to send to different parts of the state the society's exhibit, immediately following the close of the International Tuberculosis Exhibition which is being held in Philadelphia.

Philadelphia

Physicians Favor Proposed Legislation.—At the monthly meeting of the Southwark Medical Society and the Germantown Branch of the Philadelphia County Medical Society, resolutions were adopted endorsing the Herbst bill for one state medical examining board. The weekly bulletin of the county society says:

> Never before has the medical profession been such a unit in support of wise legislation for the people as is shown in its present support of the proposed new medical act. The faculties of the great medical schools of this teaching center have at this date an endorsement of the act under discussion, and that of the Medico-Chirurgical College has voted favorably in the matter. The following organizations, representing all phases of the Philadelphia profession, have within the past ten days acted officially in endorsement of this just measure: Northwestern Medical Society, West Philadelphia Medical Association, Philadelphia Medical Examiners Association, College of Physicians of Philadelphia, Philadelphia Obstetrical Society, Germantown Branch of the County Medical Society, Southwark Medical Society, Kensington Branch of the County Medical Society, Medical Club of Philadelphia through its executive committee, Philadelphia Pediatric Society, Philadelphia County Medical Society, Pathological Society of Philadelphia, West Branch of the County Medical Society, Northern Medical Association.

VIRGINIA

Anti-Spitting Law.—Beginning with February 8, the state law and city ordinance prohibiting spitting on sidewalks, crossings, and in street cars, which have been practically a dead letter in Richmond, will be rigidly enforced. The city ordinance provides a fine of from $2 to $5 for each offense and the state law a fine of from $1 to $5, with alternative imprisonment in jail for five days.

Anaphylaxis.—On February 6, Dr. John F. Anderson of the hygienic library of the Public Health and Marine-Hospital Service, gave an account of the work done by himself and Dr. Milton J. Rosenau on anaphylaxis to the faculty and students of the Medical Department of the University of Virginia, in the series being given under the auspices of the Medical and Biological Club of the university.

Course in Hygiene.—The medical department of the University of Virginia announces a course in practical hygiene for health officers and others interested in public health work. The course will begin June 12, and continue eight weeks. Next year the combined resources of the departments of medicine and engineering of the university expect to offer a course leading to the degree of sanitary engineer.

Personal.—Dr. L. C. Smith has resigned as assistant surgeon of the National Soldiers' Home and Dr. Samuel R. Catts. Alexandria, has been appointed in his stead.——Dr. Robert F. Williams, El Paso, Texas, formerly of Virginia. has been appointed superintendent of the Catawba Sanatorium for Consumptives.——Dr. Junius [illegible] Lynch, Norfolk. has been appointed deputy surgeon general, medical corps. Virginia Volunteers. with the rank of lieutenant colonel.——Dr. J. Paulett Clark has succeeded Dr. Denn[illegible] M. Thomasson as assistant in the Hygeia Hospital, Lynchb[illegible]

GENERAL NEWS AND COMMENT

Prohibits Importation of Opium.—The senate, February 2, passed the house bill to prohibit the importation of opium into the United States, excepting for medicinal purposes. It requires only the signature of the President to become a law.

Aid Asked for Carroll's Widow.—An appeal has been sent out from the office of the surgeon-general to all medical officers of the Army asking for contributions to relieve the distress in which the widow of Major James Carroll is placed. It is stated that there is a mortgage on Mrs. Carroll's home. She has a pension of $125 per month, which is not sufficient to support herself and family of seven minors.

Missouri Valley Society to Meet.—The semi-annual meeting of the Medical Society of the Missouri Valley will be held in St. Joseph March 18 and 19, under the presidency of Dr. Charles B. Hardin, Kansas City. Dr. Herman J. Boldt, New York City, will deliver the oration in surgery, and Dr. Nathan S. Davis, Chicago, the oration in medicine. After the adjournment there will be an excursion to Sulphur Springs, Ark.

Pollution of Lake Michigan.—At the meeting of the Lake Michigan Sanitary Association in Chicago, February 9, at which delegates were present from thirteen towns along the lake in Illinois, Indiana, Wisconsin and Michigan, the statement was given out that the water supply of Chicago was threatened on the south by the Calumet river and sewage from adjacent Indiana towns; from the north by the sewage from Evanston and by the refuse from shipping, especially from excursion and passenger boats, and by dumping being done in the lake. Dr. William A. Evans, Chicago, was elected president of the association; Prof. H. E. Barnard, Indiana, first vice-president; Mayor Lawrence Becker, Hammond, Ind., second vice-president; and W. R. Humphrey, Chicago, secretary.

Commemorative Gift to Sir Felix Semon.—On Jan. 1, 1909, the *Internationales Centralblatt für Laryngologie* began its twenty-fifth volume. The staff of collaborators, past and present, united in sending to the editor-in-chief, Sir Felix Semon (London, Eng.), a token of commemoration of his twenty-five years of editorship and as the founder of the journal. The gift consisted of a silver box in the shape of a bound volume, the cover being a fac simile of the monthly journal, and bearing the inscription to Sir Felix: "In love and respect as a token of their acknowledgment of his valuable services to laryngology, and in grateful recollection of his courteous consideration of themselves." At the same time the prominent laryngologic societies of the world sent letters of congratulation, dispatches, and honorary fellowships, each message breathing the hope of a long life and continuance in the work for many years. Sir Felix expressed his sincere appreciation, and stated his intention to retire from all active work, including his editorship. He had already arranged that Dr. George Finder of Berlin, the present vice-editor, should take his place. It has been a source of much gratification to his friends that all the good wishes were sent him before any one had an idea of his proposed retirement. By his action laryngology has lost a powerful champion, his contributions to the science will be sadly missed, and he carries with him the loving and grateful remembrances of those who know him best.

FOREIGN

German Roentgen Congress.—The fifth German Roentgen congress is to be held at Berlin, April 18, at the conclusion of the surgical congress. Prof. P. Krause of Jena will preside. Dr. Immelmann has charge of the exhibit; his address is Lützowstrasse 72, Berlin W. 35.

German Surgical Congress.—The thirty-eighth congress of the German Surgical Association is to convene in Berlin, April 14-17, with Prof. H. Kümmell in the chair. The meetings are to be held in the Langenbeck House where there will also be an exhibit of surgical appliances, etc.

German Congress of Orthopedic Surgery.—The eighth congress of the German Association for Orthopedic Surgery is to be held April 13 at Berlin, the day before the opening of the general surgical congress. Special attention is to be paid to congenital dislocation of the hip joint, and addresses are to be presented on twelve aspects of this subject, including one by Lorenz on his present technic for reduction and one by Becher on the anatomic and functional results of non-operative reduction in older patients. It is proposed to make a collective investigation of the results to date of non-operative reduction. In taking skiagrams of the dislocated hip joint, the anticathode of the tube should be placed at the center of a line connecting the two anterior superior iliac spines: if possible two skiagrams should be taken of each patient, the first to determine the question of the frequency of anteversion or torsion of the femur. The feet should be placed parallel, the patella in front. The second skiagram with pronounced inward rotation is to determine the frequency of coxa vara and coxa valga with congenital dislocation of the hip. By observing these directions it will be possible to compare the skiagrams of different cases much more instructively. Prof. F. Lange will preside at the congress.

Aid for Stricken Physicians in Southern Italy.—Prof. Galli of Rome has appealed to the medical press of Germany for subscriptions to aid the medical men in the earthquake district who have lost their all, and the widows and orphans of physicians. The *Münchener med. Wochenschrift* at once opened a subscription list for the purpose, and Professor Jacobs of Brussels has opened a similar subscription in Belgium, entitled "Pro Italia medica," in charge of a committee of professors from the various Belgian universities. It is proposed to make this an international movement and Professor Ségond has been appointed the representative in France, Professor Mendes de Leon in the Netherlands and Prof. E. Pestalozza of Rome in Italy. The aim of this subscription is to care for the future of the children of medical men who lost their lives in the earthquake. The *Policlinico* at Rome opened a subscription list at once for aid for the stricken physicians, and its weekly issues acknowledge the receipt of all sums forwarded to it. The address is Administrazione del "Policlinico," Corso Umberto I, Rome, Italy. The sums received are turned over at once to the various local medical authorities so that they can be distributed promptly and directly to the deserving. The *Policlinico* publishes in its latest issue one of the numerous letters it has received from physicians in the stricken district. The writer states that he and his surviving children are almost naked; not a single wall is left standing, and 2,500 of the 7,000 inhabitants are dead. He asks how he is going to live in this desolation and where could he go in such plight to start anew. His long and arduous life work had left him poor, he adds, but the earthquake plunged him into the abyss of every misery. And yet these medical men in this plight are performing prodigies of devotion and valor, examples of which are cited in the editorial.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, Feb. 6, 1909.

The Reform of the Army Medical Service

After the discovery of the defects in the Army Medical Service during the Boer War most sweeping reforms were made, which have been reported from time to time in THE JOURNAL. The result now is that the British army can boast of the most efficient medical services in the world. One of the results is the handsome building known as the Royal Army Medical College, built on the Thames Embankment, and equipped in the most modern fashion for the instruction of army physicians. Lord Middleton, who, as secretary of state for war, founded the college, speaking at a dinner given in his honor by the members of the college, said that never again in regard to sanitation, except on the most absolutely and exclusively medical points, would the principal medical officer in the field play "second fiddle" to any combatant officer whatever. It was now realized that for every wounded man a medical officer would have to heal he could save a dozen lives by the sanitation of his hospital, by the proper selection of the site of camps, and by control of the drinking water. This is very different from the spirit of a former commander-in-chief of the British army, Lord Wolsey, who not very long ago, in an official publication, advised commanding officers to pay no attention to the recommendations of medical officers, for he had never known one to make a wise one!

The Contamination of Canned Foods

The local government board has issued a further report on the presence of tin in canned foods in the course of which Dr. S. B. Schryver describes an experiment which he carried out on his own person in order to determine the relation between the intake and excretion of tin. For one week he took daily with meals one grain of tin salts, during a second week two grains, and during a third week three grains. At the end of a fortnight there was no evidence of a retention of tin, but when three grains were *ingested daily, about two* grains were retained in the system during the week. Commenting on this investigation, Dr. G. S. Buchanan, inspector of foods, says it suggests that in the case of food contaminated with tin the larger portion of the tin does not become absorbed from the alimentary canal and that accumulation in the body takes place slowly. He concludes that there is no serious risk of chronic poisoning from absorption of relatively small quantities of tin from a diet largely consisting of canned foods over considerable periods. Nevertheless, in any kind of canned foods, quantities of tin approximating to two grains to the pound must be regarded with grave suspicion, but there is no reason to suspect that in ordinary circumstances such large quantities would be present. Tin is taken up by meat extracts and essences to a greater extent than by most other meat foods, and as time goes on the quantity of tin taken up increases from the can. Dr. Buchanan suggests that health officers should direct special attention to canned foods more than one year old, and if two grains of tin are found, it may be taken that the food is potentially dangerous to health. He recommends the compulsory provision on tins of marks showing the date and place of preparation.

Nostrum Quackery Penalized in New Zealand

In many respects the Australasian colonies are in advance of the mother country in regard to their legislation. In the present year there has come into force in New Zealand very drastic legislation for the prevention of the frauds of the *nostrum exploiter. Every person commits an offense who, in* promoting the sale of any medicine or appliance for the treatment of disease publishes any statement which is false in any material particular relating to the ingredients, composition, structure, or to the effects which have followed or may follow the use thereof. For the first offense the penalty is a fine not exceeding $500 and for the second or any subsequent conviction not exceeding $1,000. Not only is the exploiter who publishes such statements liable to these penalties, but also the printer, publisher and proprietor of any newspaper in which they are published. Some legislation of the kind is badly needed in Great Britain. The advertisement sheets of our leading papers are largely occupied with these fraudulent statements.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Feb. 2, 1909.

The Chair of the History of Medicine at the Faculty of Medicine at Paris

Dr. Gilbert Ballet, professor of the history of medicine and surgery in the Faculty of Medicine at Paris, has been nominated at his own request professor in the clinic of mental pathology and diseases of the brain in succession to the late Dr. Joffroy. Undoubtedly, from his entire past career, by the nature of his work, and by his competence in psychiatric matters, Dr. Ballet will be much more at home in the chair of clinical and mental pathology than in that of the history of medicine and surgery, for which, indeed, nothing marked him out as especially fitting. It is most regrettable that the chair of the history of medicine and surgery should have become merely a waiting post, a kind of lobby, as it were, that one has to pass through to attain to any other chair more eagerly sought after. For this reason, since 1899 it has been successively occupied by Professors Brissaud, Dejerine and Gilbert Ballet, all of whom, moreover, from the commencement of their course did not hesitate to proclaim their incompetence in the subject. Brissaud occupied the chair hardly a year and a half, Dejerine about six years, and Ballet less than a year and a half. The prestige of the chair, even of the faculty itself, evidently can gain nothing from these frequent changes.

A New Medical Organization: The Syndicate of Social Medicine

New economic conditions, created by the development of the laws of hygiene, of public assistance and of industrial insurance, by the increase of works of cooperation and philanthropy, by the extension of public municipal and state medical services have altered the conditions of medical practice. It is the socialization, more and more accentuated, of medicine which tends to transform the physician little by little into a public functionary, and it is precisely this tendency which the medical profession in France is seeking to combat, in claiming for all sick persons the right of freely choosing their own physician. Certain physicians have thought that in this field of public hygiene and social medicine the interests of the working people are bound up with the interests of physicians, and that consequently labor and medical organizations *should draw nearer to each other for the defense* of their common interests and for the success of their common demands. It is due to the inspiration of these ideas that there has recently been established a new association, the National

Syndicate of Social Medicine. This association has for its objects: (1) The study of the conditions of existence and of work imposed on physicians by modern medico-social legislation (public medical aid in all its forms, the law concerning industrial accidents, that for the protection of the public health, etc.) and the defense of their interests in this field, the determination of their requirements and the action possible to accomplish them; (2) the control of the conditions of application of medical social laws as regards both the public services, financial associations, and the various forms of insurance or administration; (3) concerted action with the labor organizations regarding everything that concerns questions of public hygiene and of social and professional medicine.

The number of possible adherents to the new organization is unlimited. When, in any region, the number of adherents shall have become sufficiently large, there will be established a district section with power to subdivide itself into local groups. Each organic unit is to preserve its autonomy as regards its mode of operation and its finances. The general action of the syndicate will be determined by the congress, which will take place yearly.

The International Congress of Hydrology and Climatology

The Eighth International Congress of Hydrology, Climatology, Geology and Physical Therapy will take place at Algiers from April 4 to 10, 1909, under the patronage of the governor of Algeria. The committee is organizing an exhibition of objects and apparatus relating to the sciences dealt with by the congress; it will comprise plates, engravings, photographs, pamphlets, etc., in regard to watering places, the number of visitors, output of bottles of water, etc., physiotherapeutic apparatus and models in relief. The organizing committee of the congress, with the assistance of the Algerian winter resort committee has also arranged excursions to interesting points in Algeria and Tunis. Particulars are furnished by M. Hérial, professor at the School of Medicine, 14 Rue d' El-Biar, Algiers.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, Jan. 20, 1909.

Arrangements for Private Patients in the Berlin City Hospitals

Some weeks ago an ordinance was proposed in the Berlin city council to provide in the city hospitals and their sanatoria special arrangements for paying patients. In the municipal hospitals there has been heretofore only a single class of patients, because the hospitals are regarded as essentially for the poor and those who belong to the working classes. Hospital affairs are under the charge of the poor authorities, and it is a result of this arrangement that those who are admitted to the municipal hospitals lose their municipal electoral rights during their stay, a disadvantage which has been repeatedly unfavorably criticized. Some of the university clinics also have no arrangements except for those without means or those belonging to the sick benefit societies, while some other clinics, such as the surgical, have provision for second and first class accommodations for the poor and also for well-to-do private patients. The denominational hospitals have almost always arrangements for both pay and charity patients. In spite of the fact that a considerable number of beds are provided for well-to-do patients in these hospitals as well as in the private sanatoria, the need of similar arrangements in the municipal hospitals has made itself felt, especially for patients of the middle class. These, among whom must surely be reckoned attorneys, judges and other officials who are not blessed with riches, are not able to pay the high expenses for nursing and medical service in the private sanitaria. On the other hand, they are hardly to be expected to take their place in a general ward of a city hospital with dozens of those belonging to the lowest classes. In the discussion in the council regarding this ordinance there were various opinions about the desirability and necessity of the innovation. The *Deutsche medizinische Wochenschrift* sent out the following question blank to the directors of 130 hospitals of the large cities of Germany, to obtain information to aid in the decision:

1. Are there special arrangements for paying patients in the hospital conducted by you? If so: *a*. What are the details of the arrangement (expenses, demand for single room, special diet, etc.)? *b*. Do the attending physicians and assistant physicians receive special fees from these patients? *c*. Are these provisions taken advantage of to a large extent, and specially by what class of the population? *d*. How long has this arrangement been in operation? What is your experience and your opinion in general?

2. If such arrangements do not exist do you regard them as necessary or desirable or have you any objections and what are they?

To this circular 72 answers were received referring to 59 hospitals. Of these, aside from Berlin, only five have no accommodations for paying patients; all the rest receive paying patients of the first and second classes. In almost all cases patients of the first class have a private room; those of the second class are received in a room of two to three beds. In some municipal hospitals special buildings for these pay patients have been erected. The prices per day at the municipal hospitals vary between 6 and 24 marks ($1.50 to $6.00) for the first class, and between 3.75 to 12 marks (90 cents to $3.00) for the second. The patronage is almost always very good and the patients are recruited from all classes of society. The need of the arrangement was denied by only three hospital directors. With this exception, the provision for paying patients is regarded as appropriate and desirable. One of the directors remarks that according to his experience, those who possess small to moderate means are the worst cared for. The poor are well provided for in the hospitals and the rich in the sanatoria. The important and interesting matter, from a medical standpoint, of the fees paid by these patients is variously arranged. In a small number of the hospitals answering this circular physicians receive no compensation for the treatment of the patients, but in two municipal hospitals they are given a part of the sum paid by patients for expenses. In a large number of hospitals the head physicians have a limited right to receive fees; thus, only for operations or only for visits to patients of the first class outside of regular visiting hours. Almost all the hospital directors express themselves in favor of giving physicians the right to charge fees, and in fact a demand for this provision should be made, as it seems unreasonable that well-to-do patients should receive medical service in the hospitals free of charge. How the Berlin authorities will decide the matter is uncertain, but the proposed ordinance has been referred to a special committee.

Scientific Societies in Berlin

Heubner has added another to the many medical societies of Berlin in the form of a pediatric society which ought to be merely a branch of the society for internal medicine that has been in existence for thirty years under the presidency of Leyden. There are some fifty medical societies which have as their field Germany as a whole or a large part thereof, and there are no less than twenty different medical societies in Berlin. Of these the Berlin Medical Society is the largest, with 1,600 members. Its founder was the renowned oculist. v. Graefe, who was followed by Langenbeck, Virchow, v. Bergmann, and finally Senator. The presidency of this society is regarded as a high honor. In point of numbers and importance this society is followed in order by the Society of Internal Medicine, the Berlin Surgical Society, the Society of Obstetrics and Gynecology, the Society for Psychiatry and Nervous Diseases, etc.

The Surgical Society is presided over by a different president at each meeting, chosen from a group which includes the directors of the largest surgical clinics in Berlin.

The Virchow Monument

The kaiser, probably wishing to promote harmony with his subjects, which he finds very desirable in consequence of his late unpopularity, has recalled his veto of the Virchow monument design and has approved the second sketch, and the monument will now be erected on the Karl Platz near the Charité. Thus Berlin, which has had erected in the last decade a series of bad monuments, will be enriched by the addition of another scarcely satisfactory one. The compromise of the kaiser indicates that his efforts at harmony may go too far but it is to be hoped that nothing worse in this direction will develop.

Notification of Tuberculosis

Differing from Prussia, as I mentioned in a previous letter, the authorities in Lübeck some months ago required physicians not only to report deaths from tuberculosis but to notify the occurrence of open pulmonary or laryngeal tuberculosis, especially if the patient removes from his dwelling or is carried to a hospital or if in consequence of his condition or that of the dwelling he endangers his environment to a high degree or is engaged in the commercial production or sale of provisions or lives in a place where he is likely to endanger a considerable number of persons, as in a school building, boarding house, poorhouse, etc.

Pharmacology

RUPERT WELLS, M.D.

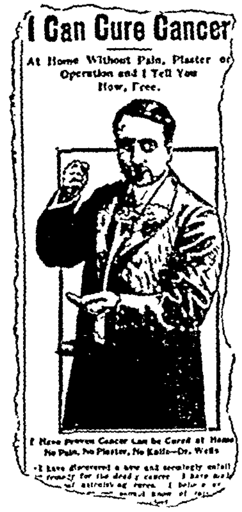
A Cancer Cure Quack Whom the Postoffice Authorities Have Declared a Fraud*

Rupert Wells, M.D., the "cancer cure" faker of St. Louis, has been denied the use of the United States mails by the Postoffice Department which, a few days ago, issued a fraud order against this notorious quack. Samuel Hopkins Adams, in his "Great American Fraud" series, paid his respects to Wells—whose real name, according to the Postoffice officials, is Dennis Dupuis—and called attention to the fact that Wells was one of the first to recognize the commercial possibilities of the public's interest in radium as an asset to quackery.

ADVERTISING MYTHS

To furnish good advertising "copy," Wells invented a mythical "Postgraduate College of Electrotherapeutics of St. Louis," and forthwith appointed himself to an equally mythical chair of Radiotherapy. His hypothetical professorship in a nonexistent college was, like his fictitious name, of use only for business purposes. Says Mr. Adams:

"Rupert Wells, M.D., is very religious—in his advertisements. He loves the church papers. The weeklies with smug and pious editorials, and no conscience whatever in the matter of paid advertising, are his green pastures. He is a home-and-fireside cuddler, is Rupert. He is also a ground-and-lofty liar of the most complete and soul-satisfying description. You can read whole pages of his 'literature' and not come on one single statement tainted with truth."


I Can Cure Cancer
At Home Without Pain, Plaster or Operation and I Tell You How, Free.
I Have Proven Cancer Can be Cured at Home No Pain, No Plaster, No Knife—Dr. Wells
"I have discovered a new and seemingly unfailing remedy for the deadly cancer. I have made ... astonishing cures.

The Characteristic Pose of the Quack.

HOW WELLS CAUGHT HIS VICTIMS

Of the "cure" itself and its methods of exploitation, the official report from the Postoffice Department says:

"Dupuis causes to be published extensively throughout the country advertisements over the name of Dr. Rupert Wells, giving his address as Saint Louis, Missouri, inviting those persons who may believe they are afflicted with cancer to write to him for free information about his treatment for the cure of that disease, and in those advertisements makes such statements as these:

"'I can cure cancer at home without pain, plaster or operation. I have discovered a new and seemingly unfailing remedy for the deadly cancer. I have made some most astonishing cures. My marvelous radiotized fluid did it. No matter what your condition may be, do not hesitate to write.'

"To the person writing to Dr. Rupert Wells in answer to these advertisements, Dupuis causes to be mailed printed letters and circulars over the name of Dr. D. Rupert Wells, describing his treatment and soliciting its purchase at the price of $15.00 a month. If the inquirer does not purchase the treatment promptly, quantities of other letters and circulars are mailed to him importuning the purchase of the treatment and by steps reducing the price, first to $10.00, next to $5.00, and then to $2.50. These solicitations for the purchase of the treatment are made absolutely without inquiry by the advertiser as to the condition of the correspondent, or whether he is actually afflicted with cancer, or in what form or location the disease may be present, but the correspondent is solicited to buy and take the treatment simply on his own assumption that he may be suffering from the disease."

POSSIBILITIES IN HYDRANT WATER

The "marvelous radiotized fluid" which formed "Dr. Wells'" stock in trade was known as "Radol (Wells)," and came in two forms, for external and for internal use, respectively. Mr. Adams tells us that the analysis made for him of this "radium impregnated fluid" disclosed the fact that it contained "exactly as much radium as dishwater does." The investigations of the Postoffice authorities confirm the earlier analysis. Says the official report:

"The Department of Agriculture purchased from the advertiser samples of 'Radol' and made analyses of same. The investigations disclosed that the fluid for internal use consisted essentially of a weak, acidulated solution of quinin sulphate in water and alcohol in the proportion of about 1¼ grains quinin to the ounce of the fluid solution and about 7 per cent. alcohol. The fluid for external use was found to be a watery solution containing about 10 per cent. of glycerin and a small quantity of inorganic salts. Both solutions were tested for radioactivity. No such activity was detected in an amount appreciably greater than is to be commonly found in ordinary hydrant water."

PSYCHIC VALUE OF ACIDULATED QUININ

Should one wonder, Why use quinin sulphate in acid solution as a fake "cancer cure"? the explanation is forthcoming from the following, also taken from the government report:

"In this connection it also should be noted that the advertising literature calls particular attention to a 'bluish fluorescent glow imparted to it (Radol) by the Radium,' as evidencing the presence of radio-activity. It is well-known that an acid solution of quinin sulphate exhibts such fluorescence. The analyses show this fluid to be such a solution."

"A DELIBERATE AND INTENTIONAL FRAUD"

The Assistant Attorney-General in passing on the case and deciding whether Dennis Dupuis *alias* Rupert Wells, M.D., was engaged in honestly practicing his profession, or whether he was practicing a scheme to defraud, reported as follows:

"A careful consideration of the circumstances of this case have convinced me, and I believe they will you, that the operations of this person are not purified with good faith, but that he has been and is practicing a deliberate and intentional fraud. . . . The fact which is clearly established by the evidence that Radol contains no appreciable amount of radioactive property, clearly negatives, I think, any idea that this person honestly believes his claim to cure by this treatment, cancer, without reservation as to its form, stage or location, and proves conclusively that he is not engaged in the business of treating and curing, or endeavoring to cure, applicants, but is simply practicing a scheme and artifice to defraud. His claim to cure cancer in all forms and stages and in any location I find is false and known by him to be false. . . ."

A SEVENTY-THOUSAND DOLLAR BUSINESS

" . . . The size of this business is indicated by the report of the postmaster that the first-class mail the week of his report averaged about 70 pieces a day; also by the statement made at the hearing for respondent that he sent out on an average about 25 treatments a day, some of which he stated were free. According to this statement, and counting only week days, about 7,800 treatments were sent out in 1908. That year the respondent stated that he sent out over 1,000 free treatments. He was then paid for between 6,500 and 7,000 treatments. The price varied from $2.50 to $15.00—but if the average were $10.00, he was paid in 1908 about $70,000.00.

"I find that the operations of this person, under the name of Dr. D. Rupert Wells, is a scheme for obtaining money through the mails by means of false and fraudulent pretenses, representations and promises, and I recommend that a fraud order be issued against the address, Dr. D. Rupert Wells and Dr. Rupert Wells, at St. Louis, Missouri."

Thus one more of the Great American Frauds has received its official *coup de grâce*. In spite of the transparency of the humbug and the heartlessness of the fake, the case was a stubbornly contested one and "Dr. Wells" was defended by legal talent drawn from both St. Louis and Chicago. That such a stupendous fake should have been able to exist and flourish for so many years, and that, too, after its thoroughgoing exposure in Mr. Adams' "Great American Fraud" series, is a sad commentary on the gullibility and ignorance of the public in medical matters. Yet but for the activity of the government officials the hopeful victims of a hopeless and cruelly painful malady would still be impoverishing themselves to purchase Rupert Wells' weak solution of quinin. The faker himself, however, is not the only guilty person connected with this heartless scheme; equally guilty are the editors and proprietors of those journals—religious and lay—which have accepted their share in the toll of pain and death by giving publicity to Rupert Wells and his "cure." Printer's ink is the very life blood of quackery; take away the support and moral influence afforded by the press through its advertising pages and Rupert Wells and others of his kind would seek more reputable, albeit less profitable, fields of operation. The work that the government officials are doing in exposing and in rendering innocuous fraud and deceit wherever it may exist, is deserving of the highest commendation, not only from the medical profession but more particularly from the general public.

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* A reprint of this matter, somewhat elaborated, will be issued in pamphlet form.

Correspondence

Colonial Medical Service in the Fiji Islands

To the Editor:—The medical affairs of Fiji, as well as other colonial interests in these islands, are centered in Suva, which is situated on the south coast of the island of Viti Levu. Suva, the capital of the group since 1882, is the chief commercial port in the islands. Of the 4,000 inhabitants, less than one-third are Europeans, the population being composed of native Fijians, Polynesian and East Indian immigrants.

Suva is a well-groomed little town nestled among the green hills of the highest volcanic island in the Fiji group. A natural harbor is formed by coral reefs which furnish excellent protection from the south seas, and permit anchorage of large ships within the reefs. The climate is warm but healthful. The mean temperature is about 80 F. The extremes lie between 60 and 94 F. From October until April the climate is hot and dry. The winter months are cool and attended by rain and winds. Many days, in winter, however, are delightful, the southeast winds blowing over the islands being only cool enough for comfort.

The anopheles mosquito is unknown, but the *Stegomyia fasciata* abounds, and only awaits the introduction of a case of yellow fever to cause this disease to take a prominent place in the calendar of Fijian diseases.

The Polynesian immigrant question is an important one among the predisposing causes of disease in Fiji, and, that one may better understand the prevalence of certain diseases, and the organization now maintained for their prevention and cure, it might be well to mention briefly the system of immigration and the relation that immigrants bear to disease. The following statistics were taken from the report of the agent general of immigration for 1907, on Polynesian immigration.

Immigrants were introduced during 1907 from Solomon Islands, New Hebrides, Banks, Torres and Queensland; 570 males and 2 females were admitted during the year, and 347 of these were allotted and indentured to employers for work on plantations, sugar refining companies, government work in Suva and the constabulary.

The total number of deaths from disease reported during the year was 56, classified as follows Dysentery, 12; fever, 2; tuberculosis, 2; pneumonia, 1; leprosy, 1; meningitis, 3; diarrhea, 2; liver abscess, 1; brain abscess, 1; lunacy, 1; heart failure, 1; influenza, 1; unknown or unstated, 16. In addition to these, 6 deaths were reported in the Colonial Hospital, 3 at the leper asylum, and 6 in Suva.

The following report of the chief medical officer on "Leprosy in the Colony for 1907" will give an idea of the prevalence of other diseases than those given in the mortality table, and the relation of immigration to the spread of those diseases: "The class most surely and rapidly invaded here is the Melanesian immigrant. His habits of living in small, ill-constructed and crowded dwellings, of wearing white men's apparel, of frequently changing articles of clothing with another, of personal uncleanliness, and his proneness to harbor body parasites of all sorts, are factors which place him in the best possible circumstances for acquiring disease—especially leprosy, yaws and tuberculosis from his fellows. Some dozen of these unfortunates are at present inmates of the asylum at Beqa."

The colonial medical and sanitary work is carried on entirely by a government staff of physicians, although native students are now being educated for medical work, of which I will speak later.

"The Honorable the Chief Medical Officer" is the title of Dr. Corney, who has charge of the medical and sanitary work for the entire Fijian group. Dr. Corney is a graduate of St. Thomas and of Oxford University, and has been a resident of Fiji for 35 years. He lives in Suva, and, although he is not on the visiting staff of the medical institutions in Suva, he lectures at the Colonial Hospital when other duties will permit.

Dr. Lynch, chief medical officer of the colony, is visiting physician at the hospital, asylum for the insane, government jail, and holds the position of health officer of the port of Suva. I did not have the pleasure of meeting either of these gentlemen. For my personal observation of cases, and much valuable information concerning medical affairs in Suva, I am indebted to Dr. G. H. Hustler, resident medical officer at the Colonial Hospital.

Dr. Hustler is an energetic young English physician and a thorough student of tropical diseases. He is a graduate of Leeds University and served with Sir Patrick Manson at the London School of Tropical Medicine. The doctor made me at home in his wards and answered my myriad of questions with the grace and patience of a college professor.

The Colonial Hospital, built about 25 years ago, is a government institution for the care of both Europeans and natives. It is maintained by the government, and the staff is composed of government officials. The hospital is situated about two miles from Suva. It consists of ten buildings grouped on a beautiful wooded and vine-clad hill overlooking the bay. The buildings are one-story wooden structures, constructed like most tropical buildings, with deep open windows and verandas.

The grounds are rich in tropical trees and plants, and winding paths lead from one ward to another.

The central, or administration building, contains the dispensary, office, consulting and examining rooms. The wards, or blocks, as they are called, are given up to classified diseases, and the European, Fijian and Indian wards are in separate buildings. The physicians' house, nurses' home, laboratory, morgue, isolation ward for dysentery, and kitchen compose the remainder of the group of buildings.

The capacity of the hospital is 120 patients, the average number is about 80.

Native patients are admitted for two shillings a day, this fee being paid by the employers, or the native office, in the case of Fijians, and by the plantation managers or the Destitute Indian Fund, in the case of East Indians.

The patients are about equally divided as to nativity among Europeans, Fijians and Indians. A matron and six European nurses are employed at salaries slightly smaller than those paid nurses in our city hospitals. They come to Fiji from England and Australia as probationers, and after learning the hospital routine and the Fijian language they assist in teaching the native students. Their course of training is three years, and besides instruction in the wards consists of lectures given twice weekly by members of the staff.

Besides the European nurses, there are in training, for native physicians, 14 students ranging from 18 to 21 years of age. Their course is also three years, and if at the end of that time they pass satisfactory examinations they are graduated as physicians for native work.

I was informed by Dr. Hustler that these students are devoted to their work, learn quickly and are cleanly and careful in their habits. They are intensely interested in geography. The progress of these students is somewhat handicapped by the fact that they can not read or write English, and but few can speak it. Their work during much of the course is done in the wards under the instruction of European nurses who speak the Fijian language.

It is the intention of the government to train midwives here also, and to bring about the custom of sending obstetric cases in from the plantations for treatment, and to furnish instruction and practice for the midwives.

The resident medical officer of the Colonial Hospital receives a yearly salary of £300 ($1,500).

Fiji furnishes a liberal and instructive clinic of tropical diseases, many of which are brought in by the Polynesians and Indians. Syphilis is unknown in the islands. Tuberculosis is frequently seen, and is on the increase in the colonies.

Malaria is unheard of except an occasional case brought from Calcutta and other Indian ports by immigrants.

I was much interested in the treatment of dysentery which is rather prevalent in the colony, and of which I saw many cases in the hospital. Dr. Hustler says nearly all the cases are amebic. Patients with dysentery are kept isolated until they cease passing blood and mucus, are relieved of pain and tenesmus, and are able to take full diet. Santonin is used extensively in the treatment of this disease. The drug is given in full doses three times every second day, preceded by sodium sulphate 4 drams. On alternate days bismuth and salol are given. Daily injections of quinin are used in strengths of 1 to 2,000 and 1 to 1,000, but the administration of santonin and bismuth is the routine treatment.

The diet consists of milk, albumin water, and during convalescence, arrow root.

Through the kindness of Dr. Hustler, I examined several cases of frambesia (yaws). This syphilis-like disease is very common in Fiji, particularly among the immigrants from the islands of the Pacific. The reason for its prevalence among these classes is given in the report of the chief medical officer on immigration and leprosy. I was informed that most of the cases which come under treatment are in the tertiary stage, the initial fever and stage of eruption probably passing unnoticed by the patients, or if noticed, do not incapacitate them for work on the plantations. The lesions of the tertiary stage are seen most frequently on the face, hands and legs, although cases are seen here in which the lesions are generally distributed. One of the most typical cases of this disease was that of an adult East Indian woman who was admitted to the hospital five days before my visit. As many such patients do, she came without history from one of the plantations, and as she spoke neither English nor Fijian, the only information to be had was from the disease she presented. The lesions in this case were confined entirely to the face and limbs; those on the face were few but striking in appearance. They consisted of oval granulating ulcers, varying in their longest diameter from ¼ to ½ inch. The surface stood out about ⅛ inch from the surounding healthy skin. The granulations were smooth and reddish yellow in color.

On the legs (tibial region) were several cicatrices of healed lesions which looked not unlike small keloids except that their color was a healthy pink. The patient was not well nourished, and the skin was dry and somewhat scaly in the region of the leg lesions. Pallor about the lips, conjunctiva and nostrils indicated a condition of anemia.

The yaws patients are allowed to run about the grounds of their own block, and to mingle with other patients in the ward. The lesions are kept well covered, however, and according to Dr. Hustler, infection from the patients does not occur in this hospital. He related an instance of a child in Fiji who was infected after long and constant association with a yaws patient.

The treatment of yaws consists of general hygienic measures, potassium iodid, grs. x to xx in aqueous solution three times a day, combined with iron in some form (usually ferri et ammonii citras) as a tonic. Mercury is sometimes given, but the administration of potassium iodid is the routine treatment. The ulcers are dressed with dilute citrin ointment. When the granulations become unhealthy and flabby, curettage is done.

I saw many cases of filariasis, which is a common infection in Fiji. The *Filaria diurna* is frequently found. The patients were for the most part affected with elephantiasis.

Dr. Hustler spoke favorably of thiosinamin in the treatment of elephantiasis. He injects hypodermically 3 c.c. every second day. This treatment, combined with rest, elevation of the parts affected, bandaging and massage, causes a decrease in the swelling and general improvement in the patient's condition. The injection of thiosinamin causes no pain, and abscesses do not form at the seat of the injection.

Ankylostomiasis is treated largely by the use of thymol, grs. xxx, repeated every three hours for one day, the thymol being preceded by compound chalk mixture. Tonic treatment by iron, quinin and arsenic in the form of Fowler's solution is used as a supplementary measure.

Cancer is rare in Fiji. I saw one case of cancer of the cervix in the hospital wards.

Epidemic typhoid is not seen in Suva, but occasional outbreaks occur on the plantations of the interior.

Dengue, influenza, tuberculosis, liver abscess, pyemia and a case of a native boy who stuck a knife in either side of a sprained ankle to relieve the pain and swelling, composed the remainder of the clinic furnished by the Colonial Hospital at Suva. It is needless to say that the boy with the sprained ankle was suffering from infection. The bones of the ankle were necrotic and amputation was to be performed soon after my visit.

About 1 per cent. of the native population and immigrants, taken together, are afflicted with leprosy. A colonial ordinance went into effect Aug. 10, 1908, by which all the lepers in the colony were segregated on the island of Beqa. Eight lepers were rejected among the Polynesian immigrants in 1907.

B. F. Jenness,
P. A. Surgeon, U. S. Navy, Talcahuana, Chile.

Miscellany

Clippings from Lay Exchanges

"CRITICALLY ILL WITH A LIGHT ATTACK."

"Friends of ——— will be sorry to learn that his son, Harold, is critically ill with a light attack of scarlet fever."—*Wheeling* (W. Va.) *Intelligencer.*

* * *

"HIS FRACTURED SKULL SETS ITSELF."

"Paul S. is doing nicely to-day and is able to be around again, even with a fractured skull. A notable feature of the early recovery of the young man is the act of practical self-healing of the fractured skull. A lump as large as the proverbial hen's egg was formed on the injured ballplayer's forehead, and the intense swelling actually drew the bone back to place almost completely. Instead of the large hole in his head, there is now but a slight dent back of the painful mound."—*Iowa City* (Ia.) *Daily Press.*

* * *

"DELICATE SURGICAL OPERATION."

The *Pocatello* (Idaho) *Tribune* thus graphically describes an operation on a ruptured six weeks ectopic gestation:

"One of the most delicate and most difficult operations known to the marvellous science of surgery was performed by ———, assisted by ———. The operation was one of those peculiar ones where the knife of the surgeon is the only thing to avert death, with the chances of recovery as 1 to 100. Thanks to the skill of Dr. ———, and his most able assistant, the patient ——— will fully recover. So dangerous was the operation, and so near was the patient to that mysterious bourne from which no traveler ever returns, that it was not until the last delicate incision was made, that the surgeons drew a breath of relief and announced success. The operation was of a most unusual obstetric variety. The lay mind can hardly grasp its delicate and difficult nature, and its successful consummation in the case of ——— evidences the possession by Dr. ——— and Dr. ——— of extraordinary ability."

Psychic Treatment of Functional Neurosis.—Dr. J. Grinker, in the *Quarterly Bulletin of Northwestern University Medical School*, December, 1908, reports a case of traumatic hysteria successfully treated by psychic methods consisting entirely in explanations, persuasion, forceful suggestions, threats and promises of rewards. The patient, a woman of 50, sustained an insignificant trauma in the right knee. Several days later she developed a typical case of traumatic hysteria. The right knee was painful and stiff and the entire right leg then became paralyzed. Various diagnoses had been made and all kinds of treatment were administered. When she came under Grinker's observation she had been a confirmed invalid for eight months, spending her time between the bed and an invalid chair. The diagnosis was traumatic hysteria; and the treatment purely psychical. In a few weeks from the beginning of treatment she was able to walk and attend to her household duties. She has now been well for over four and one-half years. Grinker declares that when the general practitioner devotes more time to the patient's mentality, the ground will slip from under the feet of the "Christian Scientist" and other "healers," who now thrive on the stupidity of mankind and endeavor to perpetuate its superstitious credulity.

Extension Treatment of Fracture of the Leg.—Dr. E. C. Riebel, in the *Quarterly Bulletin of Northwestern University Medical School*, December, 1908, prefers Hennequin's apparatus in oblique fracture of the leg, as well as in comminuted and compound fractures, as it secures the advantages of a double inclined plane with horizontal position of the leg, gravity of the leg being transposed into traction. The apparatus is expensive and may be replaced by a simpler one omitting this last feature. A frame is made of gas pipe 9 inches high, from 8 to 8½ inches wide and 20 inches long. This consists of two lateral and two cross pieces. It is open at either end above. To this is joined a U piece for the femur, 13¼ inches long, somewhat wider than the frame and movable on it to allow adjustment at any angle. Both are covered with duck cloth. Extension is made by means of a plaster shoe. Application requires great care to avoid decubitus; sufficient padding must be applied. A shoe is made by circular application of a plaster-of-Paris bandage. The shoe is then covered with oiled paper or rubber cloth and a osterior moulded splint applied from the calf to the sole of foot. The apparatus should be perfectly level when ced in the bed. By cutting a window in the splint and using duck strips for a hammock, wounds on the posterior surface of the leg may be dressed *in situ*. The extension is made by a pulley. The cord is attached to a loop of bandage incorporated in the shoe. About four pounds traction will suffice in fresh fractures to begin with: this may be increased by a pound every day up to seven pounds. In older fractures, from nine to ten pounds are required. Traction is tolerated better by day than by night. Any surplus above six pounds should be removed at night and added again by day.

Native Doctors in South Africa.—In Natal, the native doctors, says the *British Medical Journal*, are at present accorded a definite standing by the legislature; indeed, for all practical legal purposes their position scarcely differs from that of fully-qualified European practitioners. Like the latter, they are expected to take out an annual license, for which the government receives a fee of £3 ($15), and their legal recognition is so complete that within recent times certain members of this class have been allowed to use the law courts for the enforcement of the payment of fees from patients. Nevertheless, so far as real medical knowledge is concerned, they are natives pure and simple, whom it would not be easy to differentiate from the tribal "doctors," obeah men, and witch finders of the west coast of Africa. In spite of their ignorance, however, they are able, as a recent trial revealed, to get hold of the most powerful European poisons, and case after case during the past few years has shown that they are a danger to the public in other ways. Many charges of murder have originated owing to their existence, and though the accused have not always been found guilty, the trials left little room for doubt that murders are from time to time committed with a view to obtaining the heart and other parts of the human body, which in native medicine are considered of value in treatment. Furthermore, the Dinizulu inquiry and other investigations into the circumstances attending the last Kaffir rising suffice to show that men of this class exercise a strong influence over native minds, and that "doctoring for war," in which human blood and bones play a part, is still in existence. Men of the same type are doubtless to be found in all semicivilized areas, but when a colony has reached a development such as that of Natal it is difficult to believe that they are any but a retarding influence, helping to keep up customs and habits which, in the interest of all, should pass away.

Queries and Minor Notes

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer *not to publish* name or address will be faithfully observed.

BOOKS ON HYPNOTISM, SUGGESTION AND PSYCHOTHERAPY

To the Editor:—In The Journal, February 13, page 577, a correspondent asks for books on the above subjects. May I say that I consider the Nancy School as the real scientific and rational school of hypnotists, and that it is important for an amateur to start right, in taking up this study. Forel's "Hypnotism, or Suggestion and Psychotherapy," published by Rebman Company, New York, $3.00, should be read by everybody. Another good author, of this school, is Bernheim, and his book is "Suggestive Therapeutics" (Hypnotism), published by Putnam's Sons, price $3.50. Another good book to prepare the student is "Introduction to Physiological Psychology," by T. Ziehen, Macmillan Company, $1.50. I had to search my own way, and having "found myself" on this subject, hope these lines will be of benefit to all interested.

Edward Cornelius Perry, Avon, N. Y.

FERMENT ACTING ON CELLULOSE IN ANIMALS: MORPHOLOGY AND CULTURAL CHARACTERISTICS OF THE BULGARIAN BACILLUS

To the Editor:—Please refer me to literature on the ferment that acts on cellulose in animals, and also describe the morphology and cultural characteristics of the Bulgarian bacillus.

J. E. B. Ziegler, Batimore.

Answer.—1. The following references are given by von Noorden in his book "Metabolism and Practical Medicine," 1907, as dealing with the digestion of cellulose:

Weiske: Der Cellulose beim Mensch., *Zeitschrift f. Biologie,* 1870, p. 456.

Knieriem: Der Cellulose im tierisch. Organismus, *Zeitschrift f. Biologie,* 1885, p. 67.

Constantinidi: Ausnutzung des Weizenklebers im Darmkanal, *Zeitschrift f. Biologie,* 1887, p. 433.

Tappeiner: Die Gärungen der Cellulose, *Zeitschrift f. Biologie,* 1884, p. 52.

Muller: Celluloseverdauung im Dünndarm. *Archiv. für die ges. Physiol. des Menschen, 1901, p. 619.*

Henneberg u. Stohmann: Cellulosegärung für die Ernährung, *Zeitschrift f. Biologie,* 1885, p. 613.

Wilsing: Ueber die Mengen der vom Wiederkäuer in den Entleerungen ausgeschiedenen flüchtigen Säuren, *Zeitschrift f. Biologie,* 1885, p. 625.

2. *B. bulgaricus* is usually a stout and rather long bacillus, sometimes straight, sometimes curved; occasionally shorter forms occur, especially in the absence of acid. The ends are square; long filaments are frequent. The bacillus stains well with ordinary anilin dyes, and with methylene blue or carbol fuchsin; granules often appear with unstained portions, resembling vacuoles. It is positive to Gram's stain, appearing deeply blue, or violet. In old cultures the Gram stain may be negative or partially so and if counterstained with dilute carbolfuchsin part of the filament may be blue and part red. The bacillus is non-motile and probably does not form spores. Gas is not produced from sugars. There is little or no growth on ordinary laboratory media at low temperatures; only milk seems favorable at any temperature. At 37° C. there is better growth and the optimum temperature seems to be from 42 to 44° C. There is but little growth on plain sugar at any temperature. If 1 or 2 per cent, glucose be added the growth is much better. The micro-organism grows anaërobically as well or better than aërobically. On gelatin with the addition of glucose some strains seem to grow, very slowly and sparingly. On potato there seems to be no growth. Litmus milk is strongly acidified, decolorized and slowly coagulated. The amount of acid formed in milk may reach 3 per cent. (as lactic acid), the amount increasing slowly at first but rather rapidly after four or five days. The butter fat is slightly decomposed and the casein is slowly peptonized. The organism is preserved best in milk but loses vitality rather rapidly. There are undoubtedly several strains of Bulgarian bacillus. The morphology varies somewhat, but is always characteristic as described. The amount of acid produced in milk varies with different varieties. A variety has been described which produces a slimy milk.

ANTIDOTE FOR FORMALIN

To the Editor:—In the article by O. P. Humpstone and W. Lintz on "Formalin Poisoning," in THE JOURNAL, Jan. 30, 1909, p. 380, it is stated that "no antidote for this poison has yet been found." Chemically, ammonia water is a perfect antidote, as it combines with formaldehyd according to the following equation: $6CH_2O + 4NH_3 = (CH_2)_6N_4 + 6H_2O$ to form hexamethylene tetramin (hexamethylenamin, U. S. P.), which is a non-irritating substance. The ammonia should be given in dilute form and followed by copious irrigations of plain water. G. C. BOLLIN, Neeses, S. C.

ANSWER.—Our correspondent does well to emphasize this remedy, which ought to be more generally known. A case is cited by Peterson and Haines, "Legal Medicine and Toxicology," Vol. II, p. 546, in which the administration of a dilute solution of ammonia seemed to give good results. (See André, *Jour. de Pharm. et de Chimie*, 1899, x, p. 10.) The equation above given requires about one-fourth as much ammonia by weight as of formaldehyd, so that we can conveniently remember that one volume of 10 per cent. ammonia will neutralize an equal volume of 40 per cent. formaldehyd solution. In case ammonia is not at hand no time should be wasted, but the stomach or bowels should be immediately washed out with plain water or salt solution.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending Feb. 13, 1909:

Davis, W. B., col., and Rhoads, T. L., major, sailed on the *Sheridan* from San Francisco for Manila, P. I., Feb. 5.

McIntyre, H. B., lieut., granted leave of absence for one month.

Siler, J. F., capt., relieved from duty at Fort Slocum, N. Y., and ordered to Fort Jay, N. Y., for duty.

Hartsock, F. M., major, granted leave of absence for four months, with permission to go beyond sea.

Adair, G. W., col., granted leave of absence for four months.

Duval, D. F., major, granted leave of absence for four months.

Birmingham, H. P., lieut.-col., relieved from duty in Cuba and ordered to Washington, D. C., for temporary duty in the office of the Surgeon General.

Juenemann, G. F., capt., granted leave of absence for two months.

Appel, A. H., lieut.-col., granted leave of absence for 30 days.

McPheeters, S. B., M. R. C., ordered, upon arrival at San Francisco, to proceed to his home, and report for orders.

Smith, R. D., M. R. C., honorably discharged from the service of the United States, Feb. 16, 1909.

Phelan, H. du R., M. R. C., relieved from duty at Fort Baker, Cal., and ordered to Fort Shafter, H. T., for duty.

Farrow, E. J., M. R. C., sailed on the *Sheridan* from San Francisco, for Manila, P. I., Feb. 5, from leave of absence.

Tyler, G. T., M. R. C., ordered to return from Fort Jay, N. Y., to his proper station, Fort Porter, N. Y.

Boak, S. D., dent. surg., granted leave of absence for one month, upon arrival in the United States from Cuba.

Casaday, G. H., dent. surg., sailed on the *Sheridan* from San Francisco for Honolulu, H. T., Feb. 5.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the week ended Feb. 12, 1909:

SMALLPOX—UNITED STATES

Alabama: Mobile, Feb. 9, 1 case.

California: Los Angeles, Jan. 16-23, 2 cases; San Francisco, 1 case.

District of Columbia: Washington, Jan. 23-30, 1 case.

Indiana: Elkhart, Jan. 23-30, 1 case; Evansville, 4 cases; Indianapolis, Jan. 24-31, 2 cases; Lafayette, Jan. 25-Feb. 1, 5 cases.

Kansas: Topeka, Jan. 23-30, 13 cases.

Iowa: Dubuque, Oct. 1-Feb. 5, 89 cases, 1 death.

Kentucky: Lexington, Jan. 23-30, 3 cases; Newport, 13 cases.

Louisiana: New Orleans, Jan. 23-30, 7 cases.

Maine: Van Buren, Jan. 23-30, 8 cases.

Michigan: Detroit, Jan. 23-30, 3 cases; Grand Rapids, 1 case; Saginaw, Jan. 16-23, 1 case.

Missouri: Kansas City, Jan. 23-30, 1 case; St. Louis, 2 cases.

Montana: Butte, Jan. 12-19, 1 case.

Nebraska: South Omaha, Jan. 9-16, 1 case.

New York: Syracuse, Jan. 1-31, 3 cases.

Ohio: Cincinnati, Jan. 8-27, 42 cases, 1 death; Dayton, Jan. 23-30, 2 cases.

Tennessee: Knoxville, Jan. 23-30, 1 case; Nashville, 7 cases.

Utah: General, Dec. 1-30, 24 cases.

Virginia: Lynchburg, Jan. 23-30, 1 case.

Wisconsin: Lacrosse, Jan. 23-30, 2 cases; Milwaukee, 19 cases.

SMALLPOX—INSULAR

Philippine Islands: Manila, Dec. 5-12, 3 cases.

SMALLPOX—FOREIGN

Arabia: Aden, Dec. 21-Jan. 5, 5 deaths.

Canada: Ontario Province, Dec. 1-31, 118 cases, 1 death.

Ceylon: Colombo, Nov. 21-Dec. 5, 26 cases, 8 deaths.

Chile: Valparaiso, Dec. 5-12, 1 case.

France: Paris, Jan. 9-16, 2 cases.

Germany: General, Jan. 9-16, 5 cases; Königsberg, Jan. 2-9, 1 case.

Great Britain: Bristol, Jan. 9-16, 1 case.

India: Calcutta, Dec. 12-19, 16 deaths.

Indo China: Saigon, Nov. 28-Dec. 5, 5 cases, 4 deaths.

Italy: General, Jan. 10-17, 13 cases; Naples, 46 cases, 7 deaths.

Java: Batavia, Dec. 12-26, 6 cases.

Mexico: Acapulco, Jan. 10-17, 6 cases; Guadalajara, Jan. 14-21, 2 deaths; Mexico, Dec. 5-12, 5 deaths.

New Foundland: St. Johns, Jan. 23-30, 1 case, imported.

Russia: Batoum, Dec. 1-30, 1 case; Moscow, Dec. 26-Jan. 2, 29 cases, 5 deaths; Riga, Jan. 16-23, 2 cases; St. Petersburg, Dec. 19-26, 8 cases, 3 deaths.

Turkey: Trebizond, Jan. 9-16, present.

YELLOW FEVER

Barbados: Jan. 28-Feb. 4, 11 cases.

Ecuador: Guayaquil, Jan. 2-9, 2 deaths.

Mexico: Maxcanu and vicinity, Jan. 18-23, 4 cases, 2 deaths; Merida, 1 death.

CHOLERA—INSULAR

Philippine Islands: Manila, Dec. 5-19, 3 cases, 1 death; Provinces, 475 cases, 325 deaths.

CHOLERA—FOREIGN

Ceylon: Colombo, Nov. 21-Dec. 5, 3 cases, 5 deaths.

India: Calcutta, Dec. 12-19, 3 deaths; Rangoon, Dec. 19-26, 1 death.

PLAGUE

Ecuador: Guayaquil, Jan. 2-9, 2 deaths.

Egypt: General, Dec. 23-Jan. 14, 22 cases, 12 deaths.

India: Calcutta, Dec. 12-19, 9 deaths; Rangoon, Dec. 19-26, 3 deaths.

Indo China: Cholen, Jan. 28-Dec. 5, 2 cases, 2 deaths.

Turkey: Bagdad, Dec. 12-Jan. 2, 12 cases, 5 deaths; Jiddah, Feb. 3, present.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

CONNECTICUT HOMEOPATHIC: New Haven, Mar. 9. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.

CONNECTICUT ECLECTIC: New Haven, Mar. 9. Sec., Dr. T. S. Hodge, Torrington.

CONNECTICUT REGULAR: New Haven, Mar. 9-10. Sec., Dr. Charles A. Tuttle, 196 York St.

MAINE: Portland, Mar. 9-10. Dr. W. J. Maybury, Saco.

MASSACHUSETTS: Boston, Mar. 9-11. Sec., Dr. Edwin B. Harvey, Room 159, State House.

Medical Education and Nostrums, Fifth Letter

The following is the fifth of a series of letters issued jointly by the Council on Medical Education and the Committee on Medical Teaching of the Council on Pharmacy and Chemistry. With it was sent a copy of the pamphlet. "The Broader Aims of the Council on Pharmacy and Chemistry."

To Medical Teachers:—This letter treats of the remedy against the nostrum evil. Anyone who has given the subject proper thought must be convinced that the nostrum evil can only be combated by employing all our resources to the utmost. It is necessary to strike at the immediate partial manifestations of this evil; but thorough and permanent success can only be won by creating an atmosphere inimical to the whole evil.

This is not a matter which can be done in a day, nor can it be imposed on a single department. It demands the active participation of every one who is seriously interested in our profession. Every one who has the respect of his colleagues and pupils must aid by the force of his example, and by taking occasion to show his attitude toward these questions, insistently and persistently. As every department of medicine has been invaded by the nostrum maker, so every department offers all too frequent occasions to give the proper advice and warning to the students. Every teacher will know best which of these should be emphasized to his classes. By way of suggestion, merely, we shall point out some of these subjects for each department, in the succeeding leaflets. These subjects can be varied *ad infinitum*, and the Council stands ready to give every assistance in its power to those who desire further information.

Connecticut November Report

Dr. Charles A. Tuttle, secretary of the Medical Examining Board of Connecticut, reports the written examination held at New Haven, Nov. 10-11, 1908. The number of subjects examined in was 11; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 20, of whom 15 passed and 5 failed. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Yale Medical School...(1905) 89.8; (1906) 80.3;	(1908)	79.6, 82.3
Howard University, Washington	(1908)	83.9
University of Louisville	(1908)	75.6
Johns Hopkins Medical School	(1908)	79 7
Tufts College Medical School	(1908)	75.8
Harvard Medical School	(1908)	75.3, 78.4, 79.1
University and Bellevue Hospital Medical College	(1907)	77
Cornell University Medical College	(1907)	84.8
College of Physicians and Surgeons, New York	(1904)	81.7
University of Vermont	(1891)	75.8

FAILED

College	Year Grad.	Per Cent.
Georgetown University	(1908)	74.3
Baltimore Medical College.........(1906) 67.7;	(1908)	74.7
Maryland Medical College	(1908)	71.9
Western Pennsylvania Medical College	(1907)	62.9

New Hampshire December Report

Mr. H. C. Morrison, regent of the New Hampshire State Board of *Medical Examiners, reports the* written examination held at Concord, Dec. 29-30, 1908. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 22, of whom 15 passed and 7 failed. Three candidates were registered without examination, two under the exemption clause and one through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Denver and Gross College of Medicine	(1908)	86
Kentucky School of Medicine	(1908)	75
Medical School of Maine......... ...(1906) 78;	(1908)	75
Boston University	(1906)	87
Tufts College Medical School........(1907) 75;	(1908)	75, 76, 76
Woman's Medical College of Penna...(1893) 79;	(1906)	80
University of Pennsylvania	(1908)	78
Jefferson Medical College	(1908)	84
University of Vermont	(1908)	79
Queen's University, Ontario	(1908)	75

FAILED

College	Year Grad.	Per Cent.
Medical School of Maine	(1908)	68
Baltimore Medical College	(1903)	68
Baltimore University	(1903)	53
Tufts College Medical School	(1907)	67
Dartmouth Medical School	(1907)	71
Harvard Medical School	(1907)	72
University of Vermont	(1908)	71

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
University of Vermont	(1906)	Vermont

LICENSED UNDER EXEMPTION CLAUSE

College	Year Grad.
Dartmouth Medical School	(1901)
Bellevue Hospital Medical College	(1869)

South Dakota July Report

Dr. H. E. McNutt, secretary of the South Dakota State Board of Medical Examiners, reports the written examination held at Deadwood, July 8 to 10, 1908. The number of subjects examined in was 12; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 35, of whom 32 passed and 3 failed. The following colleges were represented:

PASSED.

College	Year Grad.	Per Cent.
Yale Medical School	(1905)	85.7
Rush Medical College................(1893) 83;	(1906)	83.9, 88
Coll. of Phys. and Surgs., Chicago. (1905) 78.7, 87;	(1906)	81.1
Chicago College of Medicine and Surgery	(1908)	85.4
Northwestern Univ. Medical School...(1907) 79;	(1908)	80.6
Bennett Coll. of Medicine and Surgery	(1906)	75.1, 80.2
Indiana Medical College........(1905) 75, 79.5;	(1907)	88.6
University of Iowa	(1905)	82.4
Sioux City College of Medicine	(1908)	78.4, 78.9, 83.9, 84.4
University of Michigan	(1883)	85.1
University of Minnesota...........(1892) 76.7;	(1908)	87.4
Hamline University....(1901) 78.1; (1903) 75.8;	(1908)	83.7
Lincoln Medical College	(1908)	75.2, 80.8
Eclectic Medical Institute, Cincinnati	(1908)	86.6
University of Oregon	(1908)	85
Wisconsin College of Physicians and Surgeons	(1908)	86.4
Trinity Medical College, *Toronto*	(1903)	79.8

FAILED

College	Year Grad.	Per Cent.
Rush Medical College	(1897)	54
Sioux City College of Medicine	(1906)	67.8
St. Louis College of Physicians and Surgeons	(1906)	69.7

California December Report

Dr. Charles L. Tisdale, secretary of the California Board of Medical Examiners, reports the written examination held at Los Angeles, Dec. 1-3, 1908. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 62, of whom 34 passed and 28 failed. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
University of Southern California	(1908)	75 78
Cooper Medical College..............(1907) 75;	(1908)	78.9 81.1
College of Physicians and Surgeons, San Francisco, (1906) 75.8;	(1908)	77.1. 82. 83.3.
University of California..............(1907) 76;	(1908)	76.3
Denver and Gross College of Medicine	(1908)	75
Rush Medical College, (1896) 80.4; (1902) 82.1; (1907) 76.1;	(1908)	86.3, 86.7.
College of Physicians and Surgeons, Chicago	(1898)	76.3
Northwestern University Medical School	(1908)	78.8
University of Kansas	(1898)	83.3
College of Physicians and Surgeons, Baltimore	(1894)	83.2
Harvard Medical School	(1908)	77.3
University of Michigan	(1905)	79.5
University Medical College, Kansas City	(1908)	75.7
Columbia University, College of P. and S., New York, (1898) 78.4;	(1908)	78.4.
Miami Medical College	(1904)	77.9
University of Pennsylvania........(1894) 76.1;	(1906)	81.1
Jefferson Medical College...........(1902) 75.5;	(1906)	78.6, 84.2
University of Texas	(1894)	75.1
University of Lausanne, Switzerland	(1899)	79.5

FAILED

College	Year Grad.	Per Cent.
College of Physicians and Surgeons, San Francisco,	(1907)	67.5, 68.3, 68.9, 69.9.
Cooper Medical College	(1908)	72.5
University of California	(1908)	72.8
University of Southern California. (1903) 45; (1904) 69.9; (1905) 73.3; (1907) 70.4;	(1908)	70, 72.8.
College of Physicians and Surgeons, Los Angeles	(1908)	73.9
Atlanta School of Medicine	(1908)	16.9
Medical College of Indiana	(1898)	44.4
University of Iowa................(1885) 70.1;	(1892)	66.3
Louisville Medical College	(1897)	67.1
University of Louisville	(1893)	68.4
Baltimore Medical College	(1907)	63.6
University of Michigan	(1898)	62.3
St. Louis College of Physicians and Surgeons	(1908)	65.5
Washington University, St. Louis	(1907)	71.1
Omaha Medical College	(1902)	69.5
New York University Medical College	(1893)	72.8
Miami Medical College	(1903)	62.2
Jefferson Medical College	(1894)	57.3
University of Vermont	(1907)	66.5

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Unqualified Practitioners in England

In the discussion of medical practice acts in the various states, frequent mention has been made of the apparently constant desire for change and modification of such laws, and also the tendency of one state to endeavor to adopt a provision or policy which another state is making an equally strenuous effort to discard. Evidently, this tendency is not limited to states, but is equally true of nations. An editorial in the London *Lancet*, January 23, is particularly interesting in this connection, since it shows that the British medical practice act, based on the definitive principle, is no more satisfactory than is our system of state legislation, based on the restrictive principle. After pointing out the difficulty of arousing the public to a realization of the dangers of unqualified practice, as well as the obstacles encountered in securing a change or reconsideration of any long-established regulation, the editorial continues:

> The concrete examples furnished by foreign states and modern colonies are likely to prove more convincing as to the question of practicability than abstract *reasoning* or speculation which are liable to be confronted by the suggestion of imagined difficulties. . . . A work of great practical value is the report and appendices recently issued by the Unqualified Practice Prevention Committee of the *General Medical Council, containing* a digest of the laws in force in the *British Empire* and in foreign countries which prevent or do not prevent medical practice by other than legally qualified persons. Through the valued cooperation of the lord president of the council, the cooperation of the foreign, India and colonial offices was secured by the committee so that the answers to its questions obtained by the committee are authoritative and cover all foreign countries and British colonies of importance with the exception of the United States and Canada. With regard to these, Dr. A. G. Bateman has drawn up tabular statements based on the medical practice acts of the various states and on the provincial acts of the dominion. . . . Two questions have been put, namely: (1) What constitutes a legal *qualification for* the practice of medicine and surgery? (2) What legal provisions exist for the prevention of the practice of medicine and surgery by persons not legally qualified? and tabulated.
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> persons and provide penalties of fine or imprisonment or both for transgressions. Six others may fairly be added to these as being under laws tending in the same direction, although not so definite in the restrictions imposed (making 81 countries in all having restrictive legislation). Twelve countries and colonies have no laws regulating medical practice, but this is not surprising when we consider the nature of their populations. They are India, Wei-Hai-Wei, the British East African Protectorate, St. Helena, the Somaliland Protectorate, Uganda, Zanzibar, the Cayman Islands, China, Persia, Abyssinia and Morocco. In Peru, unqualified practice does not appear to be penalized, and on the Gold Coast and in Russia the restrictions which exist only prevent the unqualified from procuring potent drugs. This leaves ten to share with ourselves (Great Britain) the peculiar position, for it must be observed that it is peculiar, of merely reserving to qualified practitioners official recognition and the privileges which naturally arise from it, including the use of medical titles and of providing penalties for persons making use of such titles when not possessed of them. The list of those last referred to is an interesting one, because it contains important British colonies and one very important European state. It is composed of New South Wales, Queensland, South Australia, Victoria, New Zealand, Sierra Leone, Barbados, St. Vincent, the Falkland Islands, Germany and the United Kingdom.
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> From this it will be seen that not only are we members of a small minority in the world, but that in Europe we share our position with the German Empire alone and that consequently we have ample opportunities of studying laws passed by European governments with a view to safeguarding effectually the patient and especially the ignorant patient.

A summary of the laws of the various European governments follows, showing that in France, Austria, Belgium, Hungary, Greece, Italy, The Netherlands, Portugal and Japan the practice of medicine is forbidden under a penalty of fine and imprisonment for anyone except a properly qualified person who, in most of these countries, must be a graduate of the state university as well as licentiate of the state. The editorial concludes with the resolutions adopted by the General Medical Council, asking for the appointment of a royal commission by parliament to inquire into the evil effects produced by the unrestricted practice of medicine and surgery by unqualified persons, which the *Lancet* hopes may be the first step toward the legislative remedy of a great public evil.

This agitation in Great Britain is particularly interesting to those in this country who recently have been considering medical practice legislation with a view to obtaining, if possible, uniformity in state legislation. The medical practice acts of practically all our states are based on the restrictive principle. Unfortunately, in but few of them is there any adequate enforcement of the law, owing to the lack of appreciation on the part of the public of the dangers to life and health of such unqualified practice and of a constant failure on the part of public opinion to support the enforcement of the law by prosecutions brought under it. Evidently, the problem in Great Britain is an equally serious one, since the *Lancet* says: "With us the most ignorant quack can treat disease or injury with impunity, and the worst he can fear if he strengthens his claim to attention by usurping medical titles is a fine of not more than twenty pounds, or half the minimum penalty which would earn for him across the channel." In other words, in Great Britain the charlatan and fakir is punished, not because he attempts to treat a patient without adequate knowledge of disease, but because he claims to be a legally qualified practitioner when he is not. So long as he does not make this claim and so long as his patients (or dupes) accept his services knowing him to be unqualified, no legal obstacle can be put in his way in Great Britain. The *Lancet* recognizes the necessity of public education, since laws passed either by Parliament in Great Britain or by state legislatures in the United States which do not have the support of public opinion are practically useless. The value of the royal commission called for by the resolutions of the General Medical Council is evident. Unfortunately, we have no provisions in our form of government for inaugurating a general inquiry of national scope, by which a question lying within the jurisdiction of the states may be investigated. We must, therefore, look for public education along this line, either from the concerted action of all the states, which practical experience has shown to be impossible, or from the unselfish and voluntary activities of some non-political organization of national scope. The possibilities of such public education are shown by the results secured in recent years in pure food legislation. Sporadic and occasional cases of quackery and imposition will probably always occur, but the people will be as quick to see the dangers from systematic and widespread deception as they have been to safeguard against impure and adulterated foods. In the meantime, the establishment and work of the Royal Commission on Unqualified Practice in Great Britain will be watched with great interest in this country, since charlatanism and its methods are about the same on either side of the Atlantic.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
Bowling Green, Kentucky

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Seventh Month—Third Weekly Meeting

DYSTOCIA

Due to Pathologic Forces

1. Excessive Uterine Contractions.—Intensity, duration (tetanic), frequency, time of onset. Causes: (a) increased irritability of uterus; (b) premature rupture of membranes; (c) obstructions, contracted pelvis, abnormal presentation, etc.; (d) operative interference; (e) ergot. Results: Increased pain, precipitate labor, rupture of uterus, asphyxia of child.
2. Weak Uterine Contractions.—Inertia or atony. Intensity, duration, frequency, onset. Causes: (a) congenital weakness of uterine muscle; (b) acquired weakness from constitutional diseases, etc.; (c) fibroids; (d) metritis; (e) distention of uterus, twins, hydramnios, etc.; (f) pelvis, tough cervix or perineum. Results: Exhaustion, infection, danger to child.
3. Pathologic Abdominal Contractions.—Inefficient from pain or fear. Treatment.

Due to Pathology of Generative Tract

Vulva: Atresia from injury, etc., hymen, edema, thrombus or hematoma.

Vagina: Congenital or acquired atresia, stenosis, neoplasms, resistant perineum, spasm of levator ani.

Cervix: Conglutination, cicatricial stenosis, rigidity, edema, neoplasms, cancer, etc, displacement of os.

Uterus: Fibromyoma, above cervix, in cervix; displacements, operations, fixations and suspension, to relieve retroflexion.

Other Causes: Ovarian tumors, enlarged spleen or kidney, tumor or distention of bladder or rectum.

Due to Deformed or Contracted Pelvis

Definition.

Diagnosis.—Pelvimetry, type of pelvimeter. External pelvimetry; iliac spines, iliac crests, trochanters, external conjugate of Baudelocque's, value of each. Internal pelvimetry; diagonal conjugate. Diameters of outlet; tubera ischii, pubic arch.

Classification.—1. By shape, generally contracted, flat, obliquely, transversely, irregularly contracted, funnel shaped. 2. Bayer's. (a) Primary, antenatal or postnatal developmental disturbances: split, assimilation, Naegele, Robert, dwarf, infantile, generally contracted, flat, irregularly contracted, funnel. (b) Secondary. (1) To pelvic disturbances, rickets, osteomalacia, osteitis, trauma, tumors. (2) To anomalies in other parts of skeleton, scoliosis, kyphosis, lordosis, kyphoscoliosis, spondylolisthesis, defects of lower extremities, congenital hip dislocation.

Prognosis.—Danger to the mother, child, with specified diameters. Indications for spontaneous labor, forceps, version, premature labor, craniotomy, pubiotomy, Cesarean section.

Due to Pathology of Fetus

1. Excessive development. 2. Malformations, double monsters. 3. Deformities, acardiacus, anencephalus. 4. Hydrocephalus, diagnosis, treatment. 5. Abdominal enlargement, ascites, distended bladder, tumors of kidney and liver. 6. Abnormal presentations, (a) transverse, shoulder, acromion; (b) compound. 7. Multiple pregnancy, simultaneous engagement. 8. Prolapse of cord, causes, treatment; short cord, treatment

Society Proceedings

COMING MEETING

Medical Society of the Missouri Valley, St. Joseph, Mar. 18-19.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

One Hundred and Third Annual Meeting, held at Albany, Jan. 26-27, 1909

(Concluded from page 581)

Etiology and Pathology of Suppurative Otitis Media

Dr. J. E. Sheppard, Brooklyn: The immediate and exciting causes of purulent otitis media are the various forms of pyogenic bacteria. Catarrhal inflammations of the nose and nasal pharynx due to colds, influenza, exanthemata, etc., direct irritation due to operative interference, forcible inflation and the nasal douche are also responsible for this condition. The predisposing causes are obstructive affections of the nose and throat, as hypertrophies and adenoids, exposure to cold and lowered resistance of the tissue cells. The pathologic phenomena are injection of blood vessels, swelling of the mucosa, exudation, serous, mucous, purulent, erosion and ulceration, with necrosis of thin membranes; rupture of the membrana tympani; bone necrosis in various directions. This sequence can be applied to some of the exanthemata.

Non-Operative Treatment in Suppurative Otitis Media

Dr. Edmund Price Fowler, New York City: Owing to the importance of home treatment, the patient, as he is out of sight of the surgeon for 98 per cent. of the time, should be instructed and provided with the means of carrying out orders. The dangers from neglect or from faulty treatment or care are numerous. The object of treatment is not only the abortion, shortening and cure of the disease, but also the prevention of complications, preservation of function and the patient's general health which is liable to suffer from long-continued suppurations. An adequate reaction of inflammation can be promoted by such means as increasing the hyperemia, leucocytosis, phagocytosis, opsonins, etc., by heat, counterirritation, constriction neck bands, suction cupping, irrigations, dry treatment, antiseptics, hydrolytics, caustics and blood letting. All these have their disadvantages as well as their advantages, and the best method consists in combining all, except the caustic treatment and neck band. Such a method he employs in his suction bell ear douche, with suitable solutions and temperature. All the advantages of the dry and wet treatment are combined and the disadvantages removed by irrigating in the presence of a vacuum, and the tendency to premature closure of the incision in the drum membrane and to adhesions is largely eliminated by this method, which also recommends itself by its simplicity, cleanliness, safety and efficiency.

Indications for and Results of Operative Treatment, Including the Simple and Radical Mastoid Operations

Dr. Wendell C. Phillips, New York: Bulging of the drum membrane, intense pain and fever, constitute a syndrome of sufficient import to warrant paracentesis of the drum membrane. It is a safe rule to open the drum membrane as soon as the diagnosis of purulent tympanitis becomes positive. A clean-cut incision with a long slender-handled, small-bladed scalpel, with the patient under nitrous oxid anesthesia, immediately relieves pressure, establishes drainage and healing takes place with but little *damage and no scar tissue*. The patient should remain in bed until all acute symptoms have subsided. The most important operation in intratympanic operations is the removal of polyps or granulation tissue, the most common symptom of which is otorrhea. A simple method of removing large polyps is by the use of a small aural snare. Ossiculectomy is employed as a means of curing chronic purulent otitis media by the removal of diseased tissue and the promotion of drainage. The intratympanic operation is indicated, (1) when a purulent inflammatory process in the middle ear does not respond to treatment and when the diseased process is chiefly confined to the drum membrane, ossicles and tympanic walls; (2) after recurrence of polypoid proliferation unless such proliferation was associated with extensive necrosis of the aditus, mastoid antrum or labyrinth; (3) as a preliminary to the radical operation. The simple mastoid operation is indicated whenever a purulent inflammatory process has invaded the mastoid antrum and mastoid cells. The indications are as follows: (1) Pain over the mastoid region; (2) tenderness over the mastoid cortex; (3) drooping of the posterior superior canal wall, and bulging of the drum membrane which does not diminsh as a result of paracentesis; (4) fever; (5) discharge; (6) subperiosteal postauricular swelling, with or without superficial abscess; (7) the presence of symptoms of intracranial complications of purulent labyrinthitis; (8) the advent of facial paralysis; (9) blood examinations in conjunction with other symptoms of mastoiditis are of great diagnostic value. Indications that call for immediate operation, whatever the concomitant symptoms may be are, (a) an acute mastoiditis, occurring in an ear which is the seat of chronic purulent otorrhea; (b) symptoms of labyrinthitis; (c) facial paralysis; (d) symptoms of intracranial involvement. The results of the simple mastoid operation are relief of pain, the cure of the destructive purulent process, the preservation of the function of hearing, the lessened tendency to serious intracranial and labyrinthine complications, the lessened possibilities of recurrence. The radical mastoid operation is performed for the cure of chronic purulent otitis media, by which is meant a number of pathologic conditions all having the common symptom, otorrhea. The purpose of the radical mastoid operation is to convert the external auditory canal tympanic cavity, the attic, aditus ad antrum, mastoid antrum and mastoid cells when diseased into one wide-open cavity, with the hope that the ramifications of the disease will be terminated. The radical operation is indicated (1) when a permanent cessation of the purulent process has not been effected by prolonged intratympanic treatment; (2) when a cure has not been effected by the removal of necrosed ossicles and curettage of the middle ear; (3) when a sudden cessation of the pus discharge produces chills, fever, vertigo, pain or other unusual symptoms; (4) when symptoms of mastoiditis supervened in chronic purulent otitis media; (5) facial paralysis occurring during the course of chronic purulent otitis media; (6) attacks of vertigo; (7) in all cases of complicating intracranial or lateral sinus involvement; (8) when there are positive evidences of cholesteatoma in the mastoid antrum; (9) when there are fistulous openings in the cortex of the mastoid process or in the osseous canal; (10) whenever depression or other symptoms of disturbed mentality accompany the disease. The operation is contraindicated (1) when the purulent process is tuberculous and accompanied by advanced general tuberculosis; (2) in advanced pernicious anemia or albuminuria and in cachectic diabetes; (3) usually in young children; (4) in cases in which the disease is confined to the ossicles without odor with improper opening in the drum membrane; (6) in all cases in which it is possible to effect a cure by other methods.

The Problem of Efficient Nursing of Persons of Moderate Income

Dr. William O. Stillman, Albany: I deal with this subject from the standpoint of a practical experiment in educating domestic nurses for their duties by a six months' course of instruction in classes and at the bedside. About one hundred lectures, given by from eighteen to twenty physicians and trained nurses, supply the didactic part of this course. Quizzes are given on each lecture. The skeleton manikins, microscope, etc., are used. Careful diet-kitchen instruction is given in methods of preparing food for the sick. Practical nursing, under the supervision of the head nurse, is given toward the end of the course.

A Case of Scleroderma

Drs. Samuel B. Ward and Erastus Corning, Albany: The first symptom that the patient noticed was a feeling of numbness in the right wrist, in May, 1908. Stiffness and swelling of the right hand followed, then of the left hand, next of both forearms and both feet and legs up to the knees. This was accompanied with edema. The case is now in the atrophic stage and apparently stationary. A variation in the leucocytosis has been observed from 11.000 to 22.000, with 35.4 per cent eosinophiles in the first differential count.

Relative Aortic Incompetency of Muscular Origin

Dr J. M. Anders, Philadelphia: The present discussion includes only cases that are of muscular or neurotic origin These may be divided into three well-defined groups: (a) Cases of muscular and nervous origin that supervene in the course of fibrous myocarditis and other less serious conditions of the myocardium, independently of valvulitis or advanced changes in the aorta; (b) cases secondary to chronic valvulitis affecting the mitral segments with failure of the left ventricle; (c) cases occurring in the course of or following acute infective diseases due to the action of the specific toxins on the myocardium. The disappearance of the murmur may coincide with periods of absolute rest; increased activity of the circulation, the result of mental excitement or physical exertion tends to reproduce the murmur. These views are extensively supported by clinical and postmortem observations and are also corroborated by the experiments of Thayer and MacCallum. Four cases are illustrative: The first was one in which dilatation of the left ventricle without much associated hypertrophy led to relative aortic incompetency. In this case appropriate treatment caused a return to normal heart sounds and normal dimensions of the heart. In two cases, failure of the left ventricle followed mitral incompetency. In instances in which the necropsy shows both left ventricle dilatation and morbid changes with more or less dilatation of the root of the aorta, not uncommonly observed, the condition of the left ventricle shares in the production of the relative aortic incompetency. Dilatation of the left ventricle when present should be taken into account in any effort to decide the cause of aortic diastolic murmurs, more especially when such dilatation is associated with other causative lesions. The murmur of relative incompetency may disappear during asystole of the left ventricle. It is to be recollected that an organic aortic diastolic murmur may absent itself either temporarily or permanently.

Nature of Foot and Mouth Disease

Veranus A. Moore, Ithaca: This disease first appeared in 1870, after a shipment of cattle from England to Canada The animals lost flesh and the debilitated condition in which they were left required several months for restoration. There are serious sequelæ, such as abscesses, sloughing of the hoofs and septicemia. There is slight mortality, only from 2 to 5 per cent. The symptoms and lesions appear with such regularity that four stages can be defined: (1) Dulness and rise of temperature; (2) the appearance of vesicles; (3) erosion; (4) healing. As yet no practical way of immunizing cattle against the disease has been discovered As the disease recently manifested itself in Pennsylvania and New York, it was an acute infectious and highly contagious disease, affecting both large and small animals Fresh, pure lymph introduced into the veins of susceptible cattle in quantities as small as 0.005 c.c., would produce the disease. One attack gives immunity but of short duration. Vesicles appear on and about the mouth, udders and feet and the membranes covering them These membranes are thin and soon break and the epithelial layer is left attached at the borders. The lesions in the human subject appear to have the same localization.

Lessons from Physiology and Treatment of Cardiovascular Diseases

Dr W. H. Gibson, Utica: In general practice one notes an apparent increase of cardiovascular disease, and the study of vital statistics shows that this increase is actual After degenerative changes have taken place, therapeutic measures are practically useless. The study of the cardiovascular mechanism suggests the value of preventive measures. Arterial changes may be considered under four heads: Chronic intoxication, as from alcohol, tobacco, coal-tar preparations, etc., improper diet and overeating, excessive muscular work, the strain and stress of modern life If it were more generally known that there were 23,000 deaths from cardiovascular diseases, while during the same time there were but 17,000 deaths from tuberculosis in New York State, more interest would be taken in these diseases.

Baths and Exercise in the Treatment of Heart Disease

Dr. Louis Faugeres Bishop, New York: The benefits derived from exercise and baths in the treatment of heart disease are essentially due to correction of abnormal tension in the blood vessels and heart muscle In valvular disease when compensation fails, there is found a loss of tonicity in the heart muscle leading to dilatation, and a hypertonicity in the blood vessels leading to contraction The same condition may be found when toxic substances impair the strength of the heart muscles. The Nauheim Schott treatment is applicable to all cases in which there is a disturbance of the balance of tonicity between one part of the vascular system and another When the cause of the disease is active it must first be discovered and removed The cause of broken compensation may be toxic or nervous or may have arisen from physical strain. In any case it is necessary to restore the tone of the heart muscle and to relieve the overtone of the blood vessels. The patient will often be found to have been overloading the system with food, to have neglected systematic exercise, or to have been subjected to nervous or physical strain The symptoms of broken compensation in a valvular case are shortness of breath, swelling of the feet and congestion and tenderness of the liver A trip to Europe often removes the cause of the trouble before the patient comes to treatment. The Nauheim baths correct abnormal vascular tone, and relieve the heart of the back strain of contracted blood vessels and promote the restoration of the heart muscle. The resistance exercises in a greater measure than the baths correct abnormal vascular tone and also increase the tone of the heart muscle The Nauheim Schott treatment has many elements, all of which are essential to the complete system. Some patients would improve by the mere change of environment, but it is likewise true that some improve by the baths and exercise alone. This treatment can be carried out perfectly well in America by any one who grasps the essential principles. To regulate the life and produce the proper home surroundings for the patient requires an amount of authority, energy and persistence that few physicians can bring to bear in the course of routine medical practice. Hence the necessity of specialists. I have had patients from other parts of America come to New York for a course of Nauheim treatment, which was conducted at a convenient hotel or hospital, who experienced just as much benefit as they did in going to Nauheim, and with no more labor on the part of the physician than is necessary for the Nauheim physicians. Baths and exercise have a large place in the treatment of cardiovascular disease, but they are not specific remedies, and must be part of an intelligent general plan.

Therapeutic Value of Blood Transfusion

Dr W. F Campbell, Brooklyn: The object of this operation is to form an anastomosis between individuals. In the selection of the donor, three points should be considered, namely, a preference for the nearest blood relation, a young and vigorous adult, and a thin subject. I employ the method of Crile with few modifications. Transfusion increases the coagulability of the blood, as well as the oxygen-carrying powers. In many instances the transfusion of blood has appeared to be of great value, as the reported cases show. There is no doubt as to the general increase in the numerical elements of the blood as the result of transfusion. The output of urea is also increased. It is hoped that heterogenous blood may become available. My experience indicates that blood is the only material and the best to meet all the indications for transfusion.

DISCUSSION

Dr. A T Bristow, Brooklyn: I had a case which demonstrated that blood transfusion was better than the transfusion of saline solution. This patient received three pints of saline solution without good results; life was saved by direct blood transfusion.

Dr Alexander Lambert, New York: In the case of a four-days-old baby, who was almost exsanguinated from hemor rhage and who was operated on by Dr. Carrel and Dr. Brewer, the radial artery of the father was connected to the popliteal vein of the baby. Improvement was so marked and immediate as to be quite dramatic.

Congenital Abnormalities of Cervical or Spinal Origin

Dr. Nathan Jacobson, Syracuse: Three conditions are considered. First: Branchial cysts in unusual positions. These may be illustrated by two cases, one situated beneath the sternocleidomastoid muscle and easily removed through an incision parallel with the posterior border of this muscle; the second, a sublingual cyst. The former manifested itself on the twenty-first day of life; the second was present at birth. Congenital conditions may not develop enough to become annoying until adult life. Congenital ranula is not due to obstruction of Wharton's duct, but is dependent on either a pathologic change in the sublingual gland, or, what is more frequent than is generally recognized, it may be of branchial origin, springing from the thyreoglossal tract. Second: Thyroid tumors entirely removed and disconnected from the normal thyroid gland. Only 17 cases of aberrant thyroid tumors are known to be recorded in medical literature, and in none had a diagnosis been made prior to operation. Third: Spina bifida, which presented urgent manifestations at birth. A case of spinal meningocele with necroses of the sac on which I operated when the child was but 2 days old yielded a perfect result, and twenty months later the child was in excellent health despite its congenital abnormality.

Points in the Diagnosis and Operative Treatment of Simple Fractures

Dr. Lewis A. Stimson, New York: The recognition of a complete fracture of a long bone is usually easy. In fractures of the small bones and of the spongy ends of long bones, and in one of two parallel and associated bones, and even in fracture of the shaft of a long bone without displacement, the usual signs of mobility and crepitus are frequently unobtainable. The search for pain on local pressure is best made with the tip of the finger or the rubber end of a lead pencil. In Colles' fracture a well-defined line of sensitiveness can be traced along the radial side and across the dorsum of the forearm just above the wrist; in fracture at the base of the neck of the femur, pain is found on pressure behind or in front just inside the great trochanter; in fracture of the surgical neck of the humerus, by pressure in front or on the outer side; in fracture of the external condyle of the humerus, by pressure on the supracondylar ridge a little above the epicondyle; in fracture of the shaft of a long bone, by pressure at the corresponding point on the most accessible side. It is necessary to support the limb so that pressure does not move the fragments. Do not mistake the sensitiveness of a bruise for that of a fracture. Pressure against the ends of a bone in the direction of its long axis causes pain when the bone is completely broken. In fracture of the ulna, the radius being unbroken, pain is caused by the extension of the elbow with pressure against a fixed object. The reasons given in favor of the general adoption of open operation in simple fractures of the shaft of a long bone are that it assures an accurate adjustment of the fragments and its maintenance by suture, and that failure of union and the drawbacks incident to the frequent permanent displacement left by other methods are avoided. Accurate adjustment of the fragments is of no great value unless it can be maintained and its maintenance by suture or other direct fixation is uncertain. If the grip of the suture is not slack it will surely break. The value of an adjustment appears to consist mainly in the removal of interposed soft parts or small fragments, which, if not removed, delay or prevent reunion or cause persistent deformity. The removal of possible obstacles to reunion is an argument in favor of operation. Repair is slower after an operation in which the fragments have been temporarily still farther displaced, as has to be done for the placing of a suture. The manipulation necessary in drilling and suturing the fragments delayed union, probably by additional injury to the periosteum. The importance of the advantages of early operation are not great; the irregularities of outline, in the great majority of properly treated cases, are functionally and cosmetically unimportant; failure of union is not only rare, but in the majority of cases in which it occurs is due to general causes, and in only a small minority to local causes which operation could remove. For the adjustment, the surgeon must depend on the usual dressings whose inadequacy is given as a reason for operating, or he must use the untrustworthy suture or other mechanical means, all of which involve the risk of suppuration and delay of failure of union. The function of the neighboring point may be diminished or lost through the implication of its muscles in the operation. Applying the standards of promptness, safety and efficiency, the operation is less prompt in its results, less safe and more efficient in only a small number of cases, and should be reserved for those cases in which its needs are clearly evident.

Fractures of the Neck of the Femur

Dr. Royal Whitman, New York: This paper is on a technical treatment of fracture of the neck of the femur designed to restore function, and was limited to a class of cases in which effective local treatment may be applied. This class is larger than is indicated by statistics. The abduction method is designed to apply surgical principles to the treatment of this fracture. The disregard of these principles explains the present low standard of success in treatment of these cases. The deformity should be corrected under anesthesia, by rotation and traction if the fragments are separated; by traction, downward pressure, on the trochanter and by the leverage of gentle abduction if the fracture be incomplete. The limb should be placed in full abduction and fixed by a long spica plaster bandage. The advantages of abduction in the treatment of complete fracture after shortening has been overcome by traction.are (a) that it makes the capsule tense and thus aligns the displaced fragments; (b) that it directs the surface of the outer fragment toward that of the inner; (c) that it relaxes the muscles whose contraction caused distortion; (d) that it apposes the trochanter to the side of the pelvis and thus checks upward displacement. By fixing the neck one is enabled by further abduction, aided by traction and pressure, to adjust the shaft in its normal relations, and thus to correct a deformity without violence or danger of displacement. During repair fixation in abduction and extension prevent the contraction which induced flexion and adduction. Repair in these fractures is slow, and can hardly be completed within a year; thus prolonged aftertreatment is essential to restoration of function.

Radical Conservatism in the Treatment of Compound Fractures

Dr. Martin B. Tinker, Ithaca: The first essential in the treatment of compound fracture is the successful management of the lacerated and contused wound. The usual methods of treatment are uncertain and illogical. During scrubbing, infectious material is often scrubbed into the wound rather than removed, injured tissues are still further damaged by scrubbing and irrigation with antiseptic solutions and are left to slough. I suggest two methods of dealing with such cases: First, in the less severe injuries the wound should be packed with oil tampons while the surrounding skin is scrubbed, and later swabbing with some strong, certain disinfectant, followed by excision of damaged tissue and closure as in an incised wound. Second, in severe crushes where tissues are pulpified and it is certain that considerable areas will become necrotic, the wound is covered with oiled compresses, the surrounding skin is disinfected, the wound swabbed with powerful germicide and dressings are applied until line of demarcation forms. More of the injured part always lives than is expected, and later operation saves all that will prove useful. Local anesthesia and nerve blocking are useful to minimize shock. An immunizing dose of tetanus antitoxin should be given in doubtful cases. Blood-vessel anastomosis bone-grafting and transplantation, skin-grafting, nerve and tendon suture should be employed in a wider range of cases than now usually employed. At present there is a tendency to neglect common surgical diseases and injuries in favor of the surgery of stomach, pancreas, brain, heart and other work. Hospital surgeons turn over fractures to internes without giving personal attention or even instructions. If results are to be improved, our best trained men must give some of their best efforts to compound fractures.

Some of the Problems of Prostatectomy

Dr. L. Bolton Bangs, New York: It is necessary that a more careful discrimination should be exercised in the patients to be operated on. Careful preliminary treatment should always be given. Fistulas are often very troublesome after perineal operations and injections of a solution of iodin with a long and suitable sinus syringe give good results. The possibility of the formation of postoperative stone should be taken into consideration and means for its prevention should be adopted.

Epilepsy

Dr. W. H. Kidder, Oswego: The uniformity of all writers on the symptomatology and diagnosis of epilepsy is striking. In considering the possible causes of epilepsy one should give attention to the peripheral irritation which might cause an outbreak of a "latent" attack of epilepsy. Certain foods should be selected for epileptics, especially in childhood. They should never indulge in alcoholic beverages. They should be instructed in the art of self control. There should be purposeful endeavors toward guiding the mental tendencies.

The First Interview with the Patient

Dr. William S. Ely, Rochester: The first examination of a patient is often inadequate and leads to erroneous diagnosis. There should be a search for the causes of disturbances that often receive only symptomatic treatment. There should be a correct estimate of nutritive changes. The scales are as important in the physician's office as the microscope. Both moral and physical disturbances are often due to hereditary influences. The psychical aspects of various disorders are largely neglected. This accounts for the existence of Christian science and similar cults and is a reflection on the medical profession.

Other Papers Read

The following papers were also read:

"Observations Based on One Hundred Cases of Prostatectomy," by Dr. J. Bentley Squier, New York; "X-Ray Treatment of Leukemia," by Dr. W. L. Schuyler, Utica; "Review of the Application of Roentgen Rays in Diagnosis," by Dr. E. W. Caldwell, New York; "Treatment of Meningeal (?) Sinus and Labyrinthine Complications," by Dr. S. MacCuen Smith, Philadelphia; "Relation of Ocular and Cardiovascular Disease," by Dr. Arthur J. Bedell, Albany; "Acute Anemia," by Dr. G. W. Crile, Cleveland, Ohio; "Remote Results Following Excision of the Shoulder Joint for Trauma and Disease," by Dr Charles L. Scudder, Boston; "Volkmann's Ischemic Paralysis," by Dr. R. H. Sayre, New York; "A Case of Leukemia with Unusual Blood Findings," by Dr. H. G. Webster, Brooklyn; "New Elastic Operations for Cicatricial Palatopharyngeal Contractures and Adhesions," by Dr. John O. Roe, Rochester; "The Modern Hippocrates," by Dr. A. Jacobi, New York; "The Exercise of Descending in the Treatment of Disease," by Dr. Heinrich Stern, New York; "Basal Fractures Treated by Subtemporal Decompression," by Dr. Harvey Cushing, Baltimore.

Marriages

James J. McKone, M.D., to Miss Nellie Hickey, both of Tacoma, February 3.

Alfred Stengel, M.D., to Miss Martha O. Pepper, both of Philadelphia, February 4.

Paul W. Gibson, M.D., Hartington, Neb., to Miss Mildred of Greenville, Ohio, January 28.

Edward J. Kirwan, M.D., to Miss Nora Adelaide Genia, both of Ludington, Mich., recently.

Edward John Murphy, M.D., to Miss Marie Loretta Drew, both of Brooklyn, N. Y., January 26.

Albert William Bradford, M.D., Sparland, Ill., to Miss E Nicholson of Aurora, Ill., January 13.

Webb J. Kelly, M.D., Piqua, Ohio, to Miss Viola Coppess Lucy Smith of La Prairie, Ill., February 4.

Presley B. Ogden, M.D., Fairmont, W. Va., to Miss Alice Sapp of near Shinnston, W. Va., February 3.

William C. Porter, M.D., Poughkeepsie, N. Y., to Miss Ethel Losee King of Catskill, N. Y., January 31.

Joseph Chandler Marshall, M.D., Chester, Pa., to Miss Annette Rowan of Liscard, Cheshire, England, at Echo Point, W. Va., January 27.

Deaths

William Buckingham Armstrong, M.D. College of Physicians and Surgeons, New York City, 1899; a member of the American Medical Association; vice-president of the Georgia Medical Association; a member of the Atlanta board of health; visiting surgeon at the Grady, Wesley Memorial and Presbyterian hospitals; associate professor of anatomy in the Atlanta College of Physicians and Surgeons; formerly president of the Grant Park commission; died at his home in Atlanta, February 2, from pneumonia, aged 35. At his funeral the active pallbearers were members of the medical profession of Atlanta and the honorary escort was made up of members of the Atlanta Pathological Society, Chi Phi Fraternity, faculty of the Atlanta College of Physicians and members of the staffs of the hospitals with which Dr. Armstrong was connected.

Gurdon Wadsworth Russell, M.D. Yale Medical School, New Haven, Conn., 1837; vice-president of the American Medical Association in 1878; president of the Connecticut State Medical Society in 1871; for fifty years a member of the staff of the Hartford Hospital, and for many years its president; president of the Hartford Retreat; one of the organizers of the Hartford Medical Society, which in 1887 gave him a loving cup in recognition of his completion of half a century in the practice of medicine; medical director of the Aetna Life Insurance Company for nearly sixty years; the oldest alumnus of Trinity College, Hartford; a member of the Park board for twenty-five years; died at his home February 3, from senile debility, aged 93.

Andrew Easton, M.D. Bellevue Hospital Medical College, New York City, 1871; of Allegheny, Pa.; a member of the Medical Society of the State of Pennsylvania; for three terms a member and for several years chairman of the Fourth ward school board of Allegheny, and for two terms a member of the city council; died suddenly February 2, from cerebral hemorrhage, at his winter home at Miami, Fla., aged 63.

Isaac E. G. Naylor (years of practice, Ind.), a practitioner of Indiana since 1843, and for more than fifty years in Darlington; assistant surgeon in Colonel Rice's regiment raised at Lafayette to operate against Morgan during the Civil War; died at the home of his daughter in Crawfordsville, January 22, from the effects of a fall a week before, aged 89.

Charles Edward Hoye, M.D. New York University, New York City, 1890; of Seattle; a member of the Washington State Medical Association; for two terms coroner of King county, and thereafter surgeon of the North Pacific Hospital at Ravensdale until a year ago; died in the Providence Hospital, Seattle, January 24, from nephritis, aged 42.

Miles E. Van Meter, M.D. St. Joseph (Mo.) Hospital Medical College, 1879; California Medical College, San Francisco, 1886; professor of orthopedic and clinical surgery in the latter institution; formerly a member of the San Francisco board of health; surgeon to the Southern Pacific Railway; died at his home in San Francisco, January 29, aged 56.

Perry C. Clayberg, M.D. Eclectic Medical Institute, Cincinnati, 1875; Chaddock School of Medicine, Quincy, Ill., 1885; formerly dean and professor of practice and principles of medicine in the American Medical College, St. Louis; a veteran of the Civil War; died at the home of his daughter in St. Louis, February 1, from disease of the brain, aged 61.

Joseph Bernhard Mauch, M.D. College of Physicians and Surgeons of the City of New York, 1886; a member of the Medical Society of the State of New York; clerk to Captain Hall on the *Polaris* Polar expedition from 1871 to 1873, and the last survivor of that expedition; died at his home in New York City, February 2, from cerebral hemorrhage, aged 59.

James H. Hanna, M.D. Memphis (Tenn.) Hospital Medical College, 1886; a member of the American Medical Association and Tri-State Medical Society of Tennessee, Mississippi and Arkansas; formerly president of the Tipton County Medical Society; died at his home in Covington, January 29, aged 49.

Moses Jones, M.D. Kentucky School of Medicine, Louisville, 1899; Starling Medical College, Columbus, Ohio, 1895; of Oak Hill, Ohio; a member of the Ohio State Medical Association; died at the home of his sister in South Wellston, Ohio, February 2, from tuberculosis, aged 36.

Benno Bribach, M.D. Missouri Medical College, St. Louis, 1880; of Carondelet, St. Louis; a member of the American Medical Association; died at St. Luke's Hospital, St. Louis, January 29, after an operation for disease of the spine, aged 62.

Thomas W. Prather, M.D. Meharry Medical College, Nashville, Tenn., 1903; a member of the executive board of the Red Cross Sanitarium, Louisville: died at his home in that city, from valvular heart disease, January 26, aged 40.

Lambert Watson, M.D. University of the Victoria College, Cobourg, Ont., 1888: for several years a practitioner of Chesaning, Mich.; died at his home in Burton, B. C., May 30, 1908, from nephritis, aged 45.

Deane Richmond, M.D. University of Vermont, Burlington, 1882; physician to the Vermont State Prison for several years; died at his home in Windsor, February 1, from tuberculosis, aged 47.

Elizabeth James, M.D. Hahnemann Medical College, Chicago, 1876; of Chicago; died in Cook County Hospital, February 8, two months after a fall in which she fractured her leg at the hip, aged 78.

Washington Brenton, M.D. Rush Medical College, Chicago, 1854; a pioneer practitioner of Tuscola, Ill.; died at the home of his daughter in that city, January 28, from senile debility, aged 85.

John Hutchison, M.D. Queen's University, Kingston, Ont., 1869; of Toronto; formerly of St. Thomas, Ont: died in St. Michael's Hospital, Toronto, from nephritis, February 1, aged 62.

James Elmer Marsh, M.D. Jefferson Medical College, Philadelphia, 1884; a member of the American Medical Association; died suddenly at his home in Springfield, Mass., January 23, aged 50.

John Bailey, M.D. Homeopathic Hospital College, Cleveland, Ohio, 1862; a hospital steward during the Civil War; died at his home in Sioux City, Iowa, February 2, from diabetes, aged 77.

Orville Augustus Olson, M.D. Rush Medical College, Chicago, 1903; of Axtell, Neb.; was instantly killed in a railway accident between Dotsero and Spruce Creek, Colo., January 15, aged 32.

S. G. Robertson, M.D. University of Pennsylvania, Philadelphia, 1860; a member of the Arkansas Medical Society; died at his home in Monticello, January 29, from heart disease, aged 71.

Edwin Clinton Dennin, M.D. Long Island College Hospital, Brooklyn, N. Y., 1895; of South Brooklyn, N. Y.; died in Long Island College Hospital, February 1, from pneumonia, aged 39.

E. M. C. Neyman, M.D. Jefferson Medical College, Philadelphia, 1836; formerly of El Reno, Okla.; died at his home in Saltillo, Ind., January 4, from senile debility, aged 100.

William S. Edwards, M.D. Jefferson Medical College, Philadelphia, 1856; died at his home near Siler City, N. C., January 15, from influenza, complicating malaria, aged 76.

Leonard Dearth, M.D. Medical School of Maine, Brunswick, 1884; formerly of Foxcroft, Maine; died recently at his home in Los Angeles, Cal., from rheumatism, aged 50.

George Hemminger, M.D. Detroit Medical College, 1869; formerly a member of the American Medical Association; died at his home in Carlisle, Pa., January 21, aged 64.

David L. Garland, M.D. University of Nashville (Tenn.) 1901; formerly of Rabun Gap, Ga.; died at his home in Clayton, Ga., January 22, from nephritis, aged 37.

Simeon M. Robertson, M. D. College of Physicians and Surgeons, 1878; died at his home in Mount Vernon, Ill., from tumor of the stomach, January 30, aged 69.

Alexander Williamson, M.D. University of Pennsylvania, Philadelphia, 1878; died at his home in Asbury Park, N. J., from heart disease, February 2, aged 61.

John W. Petrie (years of practice, Ill., 1878), an eclectic practitioner of Nilwood, Ill.; died suddenly at his home, January 31, from heart disease, aged 75.

Joseph Henry Spears, M.D. Jefferson Medical College, Philadelphia, 1853; died at his home in Augusta, Ga., April 1, 1908, from cholelithiasis, aged 76.

Frank G. Taylor, M.D. Eclectic Medical Institute, Cincinnati, 1875; died at his home in Reynoldsburg, Ohio, January 29, from kidney disease, aged 57.

James Monroe Garvey, M.D. University of Buffalo (N. Y.), 1882; of Tower Mich; died in a sanitarium at Traverse City, Mich., February 1, aged 69.

Bricey M. Owen, M.D. Atlanta (Ga) Medical College, 1869; of Hollonville, Ga.; died at the home of his daughter in Haralston, Ga., January [illegible]0, aged 65.

Mary A. Jenks (license Rhode Island, 1895), for fifteen years police matron of Pawtucket, R. I.; died at her home in that city, January 26, aged 77.

Barnabas Malloy (years of practice, Ill., 1878), formerly of Olney, Ill.; died in St. Louis, January 28, while on his way to Texas for his health.

Corlis Mason Holt, M.D. Cornell University, New York City, 1902; of Newfield, N. Y.; died February 2, from spinal meningitis, aged about 50.

John G. Hall (years of practice, Ill., 1887), was found dead in his room in Springfield, Ill., February 2, from gas asphyxiation, aged 80.

Jefferson Davis Hooker, M.D. Louisville Medical College, 1886; died at his home in San Antonio, Dec. 1, 1908, aged 47.

Herbert E. A. Hanke, M.D. Hahnemann Medical College, Chicago, 1905; died at his home in Chicago, February 4.

Book Notices

THE NATURAL HISTORY OF CANCER. By W. Roger Williams, Fellow of the Royal College of Surgeons. *Cloth. Pp. 519. Price,* $5.00. New York: William Wood and Co., 1908.

Once in a while—but all too rarely—we find a book whose author has for years pondered his subject, considered it from innumerable aspects, accumulated a vast fund of facts bearing on it, and finally become saturated with it. Such a book is entitled to respectful consideration, and needs no explanation for its addition to the flood of literature which overwhelms us. The book under consideration is one of this sort. It is the work of a man who has evidently given the thought of a lifetime to the problems of cancer. The work is an attempt to marshal the known facts of cancer for the purpose of considering them by the methods of inductive reasoning—Williams calls it a synthetic research. It is really the method of Darwin applied to the subject of cancer. The result is not a solution of the cancer problem, but it is a most instructive and illuminating review of our knowledge of the subject.

The book is a colossal collection of facts. Behla has published a bibliography of carcinoma literature to 1900, and this mere bibliography is a large octavo volume of 250 pages. Williams apparently has been on terms of intimate familiarity with all that literature for years, and has taken pains to make himself immediately acquainted with all that has appeared since that date. In this work he considers the subject of cancer in the broadest way. Geographical distribution and incidence, topographical distribution, cancer and other tumors in animals (as distinguished from man), tumors in vegetable organisms, the genesis of malignant tumors, the experimental study of cancer genesis, cancer and tumor growths in relation to growths in general—these few chapter headings may serve to suggest the extent of Williams' purview of the subject. Perhaps it should be said that this does not include a formal consideration of the histology of cancer.

Williams' temper, we should say, is a combination of the philosophical and the militant. He is no respecter of authority and is impatient, justly we think, with the common tendency to consider cancer almost exclusively from the laboratory standpoint. His work has an avowed purpose, which is highly dangerous to its scientific character—that is, he starts out to maintain a thesis: "From the biologic standpoint, tumor formation may be regarded as a phenomenon of the same order as reproductions in general—that is to say, as a special form of overgrowth of the individual. This implies recognition of the affinity between tumor formation and morphologic variation in general. . . . What is variation but a novel kind of cell multiplication? And what is tumor formation but a special variety of this novelty? . . . In the sequel it will be shown that the determining factor, the true cause of all these variations, is nutrition—using the term in its widest sense." But his spirit is philosophical and his method scientific, and, while we can not always accept his conclusions, he arrives at no absurd positions, and his surveys and opinions stimulate thought, even when they do not receive acceptance. He has a sonorous, classical diction, which is distinctly agreeable. His is none of your flippant Kiplingesque English, but a sound Johnsonian style, fit to tell dignified facts in a dignified way. Every now and again the reader encounters a term like "generalities de tumoribus," that he enjoys, because it reminds him of his Latin and is not too hard for him to understand. The book is a valuable addition to cancer literature and is worthy of careful reading by every one who wishes to have a large view of the cancer problem.

Modern Medicine Its Theory and Practice In Original Contributions by American and Foreign Authors Edited by William Osler, M.D., Regius Professor of Medicine in Oxford University England. Assisted by Thomas McCrae, M.D., Associate Professor of Medicine and Clinical Therapeutics in Johns Hopkins University Baltimore. Volume V, Diseases of the Alimentary Tract Cloth Pp 903, with Illustrations Price, $6. Lea & Febiger, 1908.

This volume is devoted to diseases of the alimentary tract, and is divided into ten chapters, as follows: 1, introductory discussion on the diseases of the digestive apparatus, by Charles G. Stockton; 2, diseases of the mouth and salivary glands, by David Riesman; 3, diseases of the esophagus, by John McRae; 4, functional diseases of the stomach, by Julius Friedenwald; 5, organic diseases of the stomach, by Charles F. Martin; 6, diseases of intestines, by Alfred Stengel; 7, diseases of the peritoneum, by Humphrey Davy Rolleston; 8 Splanchnoptosis, enteroptosis, or Glénard's disease, by Thomas R Brown; 9, diseases of the pancreas, by Eugene L Opie; 10 diseases of the liver, gall bladder and biliary ducts, by A O J Kelly. The volume is probably one of the most evenly balanced in the series and the amount of space assigned to the different topics seems to be in good proportion to their importance. The articles are thorough and well written and the volume undoubtedly contains the best and most complete summary in English of the present knowledge of the diseases of the alimentary tract. While this liberal praise is accorded attention must at the same time be called to certain shortcomings which this volume shares with its predecessors The number of references given varies greatly in the different articles, some, like Riesman's article on the mouth and salivary glands and Rolleston's on the peritoneum being abundantly supplied with uniformly arranged and, with some exceptions, correctly abbreviated references, while most of the other articles have comparatively few, and those are given in a haphazard manner. Moreover, there is no authors' index These are defects that lower the usefulness of the volume and prevent it from reaching that highest grade of scholarship our newest and largest systematic treatise on medicine should have maintained throughout.

Practical Life Insurance Examinations By Murray Elliott Ramsey, M.D. Cloth Pp 230 Price, $1 25 Philadelphia and London: J B Lippincott Co. 1908

The importance of medical selection in the field of life insurance is evidenced by the activity of medical writers on insurance. The work of Dr. Ramsey is the latest of several good manuals; while it contains little that is new, it is worthy of commendation on account of the clarity and systematic arrangement of the chapters on physical examination of the chest and abdomen. The chapters on "Diseases and Conditions Affecting Life Insurance" and on "Insurance of Substandard Lives" present briefly and plainly opinions and conclusions which are at present considered sound Future statistics will doubtless modify some of these conclusions.

A Dictionary of Medical Treatment By Arthur Latham M.A., M.D., Oxon., M.A., Cantab., F.R.C.P., Lond., Physician and Lecturer on Medicine at St. George's Hospital Cloth Pp 825 Price $2 00 Philadelphia, P. Blakiston's Son & Co, 1908

Dr. Latham's aim in this book is to describe a definite course of treatment to be pursued in diseases that present a typical, uncomplicated course. The subjects are arranged alphabetically; the diseases of the skin and of the nervous system are considered, in addition to the diseases usually assigned to internal medicine. Many minor ailments also come in for a share of attention. The methods of treatment are those generally accepted by the modern practitioner, and are, therefore, reliable. The Schott Nauheim treatment is described separately in addition to being referred to under the diseases in which it is indicated. Frenkel's exercises are described separately, but Dr Latham, unfortunately, does not in that connection say in what disease or diseases they are applicable an oversight which should be corrected in subsequent editions Under the subject of locomotor ataxia they are again mentioned as a useful exercise. Moreover, Dr. Latham spells the name of the author of the exercises as Frankel The Journal (July 18, 1908, li, 239) pointed out the correct spelling which is Frenkel

Les Merveilles de l'Hypnotisme Par Géraud Bonnet médecin praticien à Oran Paper Pp 281. Price, 3 50 francs. Paris Jules Rousset 1909

Bonnet gives a cursory review of the history of the subject, discusses autohypnotization and describes the various types and common characteristics of the hypnotic states, for he holds that not one but many such exist. He discusses the subject both theoretically and practically, and insists on the reality of nervous force as an entity. He further discusses telepathy spiritistic phenomena, fascination, natural sleep, and that induced by drugs and anesthesia. Frankly, we do not like the title of this book The medical profession is waging war against the "marvelous" in medicine, with its appeal to inherited superstitious instincts, but Dr. Bonnet seems to trade on the marvelous Psychotherapy, including hypnotism has its place in medicine, and, when the present furor has settled down, will fall into and occupy that place; but works that discuss the subject from the point of view of the "marvelous" are hardly adapted to hasten that much-to-be desired time

Bestimmungen Ueber die Zulassung zur Aerztlichen Praxis im Auslande Von J Schwalbe, in Berlin Second Edition Paper. Pp 206 Leipzig Verlag von Georg Thieme, 1908

This pamphlet by the editor of the *Deutsche medizinische Wochenschrift*, gives in a very compact form the requirements for admission to medical practice in all civilized countries. The arrangement is alphabetical. In addition to the legal requirements the book gives in reference to some countries notes on the climate cost of living and the probable chance of success by a foreign physician settling there, viewed especially from the standpoint of German physicians. The information seems to be very complete, and will certainly be valuable to those interested in the regulations of medical practice and may prove of value to some American physicians who wish to change their field of professional activity.

Medicolegal

Limitation on Right of Licensed Practitioners of Medicine to Practice Dentistry

The Supreme Court of Minnesota holds, in the case of State vs. Taylor, that a person who is licensed to "practice medicine and surgery" under the statutes of that state can not by virtue thereof "practice dentistry" without securing a license as a dentist, as required by Chapter 117 of the General Laws of Minnesota of 1907

The defendant in this case was a licensed physician and surgeon and claimed that such license entitled him to engage in the incidental practice of dentistry on his own patients. He extracted two teeth for one of his patients and took an impression in wax of the mouth and cavities. He sent this impression to a dental laboratory, where artificial teeth were made and returned to him, and he delivered them to his patient and received a fee of some $38 for his services. It was conceded that he did not hold a certificate from the State Board of Dental Examiners authorizing him to practice dentistry in Minnesota, and that what he did came within the terms of the statute which defines the practice of dentistry. He was therefore properly convicted, unless protected by his license as a physician and surgeon.

The statute provides that a person shall be regarded as practicing medicine who shall append the letters M.D. or M.B. to his name, or for a fee prescribe, direct or recommend for the use of any person any drug or medicine or other agency for the treatment or relief of any wound, fracture or bodily injury, infirmity or other disease: Provided that this section shall not apply to dentists." It is true, as the defendant contended, that the practice of medicine and surgery in its broad and comprehensive sense includes the practice of dentistry, which "is medical, surgical or prosthetic. In so far as it is a direction of medical science to the prevention, modification or removal, by medicinal and hygienic remedies, of the causes and effects of disease in the dental organs, it forms part of the physician's practice, just as does the treatment of cerebral, cardiac or pulmonary diseases. In so far as it is an application of surgical skill to the fractures or to staphylorrhaphy. it is simply oral surgery, involving only such knowledge and skill in the use of instruments as every surgeon must possess." Harris, Principles and Practice of Dentistry, p. 33.

In the absence of any legislative declaration to the contrary, a certificate authorizing the holder to practice medicine and surgery would therefore entitle him to practice dentistry. But for reasons of public policy, with which the court has no particular concern, the legislature adopted the policy of dividing the field of medicine and surgery, and making a separate profession of a part thereof. It was thought that men who engaged in the treatment of diseases of the dental organs should receive special preparation and be specially licensed to practice that particular branch or department of medicine and surgery. A State Board of Dental Examiners was created and authorized to determine who should be licensed and entitled to practice dentistry in the state. A department of Dental Surgery was also established at the university, with a course of study, the satisfactory completion of which would entitle the student to a special degree of Dental Suregon. An examination of this course shows that it includes a considerable part of the work required in the medical school, but it also includes studies which relate particularly to diseases of the dental organs and others designed to insure efficiency in the mechanical work connected with the treatment.

The statute now in force provides that: "No person shall practice dentistry in the state without having complied with the provisions of this subdivision. . . . Any person who shall . : . violate any provision of this subdivision shall be guilty of a misdemeanor." And: "All persons shall be said to be practicing dentistry within the meaning of this section . . . who shall for a fee, salary or other reward paid or to be paid either to himself or to another person . . . replace lost teeth by artificial ones."

The legislature has thus defined both the practice of medicine and the practice of dentistry, and made of them two distinct professions. This statute relating to dentistry makes no exception in favor of one who holds a certificate entitling him to practice as a physician and surgeon. The court can find no implied exceptions in this statute. The words "no person" in a criminal statute, are to be given their literal meaning. From an examination of the statutes of other states relating to the practice of dentistry, the court learns that many contain express exceptions in favor of physicians and surgeons. Probably the most of them permit physicians to extract teeth or perform such other comparatively simple work. In the absence of any such exceptions, it must conclude that the legislature intended to restrict the scope of the practice of the physician and surgeon, and require him, if he desires to practice dentistry, to obtain a license from the State Board of Dental Examiners in addition to his other certificate. What was said in State vs. Vandersluis, 42 Minn. 129. to the effect that the statute then under consideration would not limit the right of a surgeon under his license, was dicta, and is not controlling.

The conviction in this case is affirmed.

Power of Courts to Order Exhumation of Bodies for Examination by Physicians in Aid or Defense of Criminal Proceedings

The Court of Criminal Appeals of Texas had in Gray vs. State, a homicide case, the novel and important question of whether a court had the power to appoint a commission of reputable and competent physicians and surgeons to make an autopsy of the body of the deceased, and to order that the commission cause the body of the deceased to be disinterred and that the commission make such thorough examination of said body as would enable them to give definite and reliable testimony of the character of the wounds, their range and depth, and as to the number of bullets lodged in the body.

The court says that it has been held that the right of interment and the right to disinter are subordinate to public health, and that the disinterment may be compelled by public authorities whenever conditions become such as that the public health is threatened.

It is evident from the authorities, both in Texas and elsewhere, that neither the right of sepulture, nor the right to have the body remain untouched and unmolested, is an absolute and fixed right, but these rights must and should yield when they conflict with the public good or where the demands of justice require such subordination.

It was not to be denied that none of the authorities which the court cited, or others to which its attention had been called, was directly in point. By analogy they furnished some aid, but it was to be confessed this was slight. The court's own reflection convinces it, however, that in legal reason, and based on public policy and enlightened justice, there can be no reasonable doubt as to what the court should do in a case such as was here presented. Courts were instituted among men for the purpose of promoting justice, the ascertainment of the truth in all controversies pending in such tribunals, and for the protection of life, liberty and property. To fairly and rightly accomplish these laudable purposes, the supreme desire and purpose is, and in every case should be, by every consideration and fair rule, to ascertain the very truth of the matter in controversy, and by such rules of evidence as will, in their nature, accomplish this result.

It will be conceded, of course, that if a body could not be exhumed when an indictment was pending and the grave be made to yield up its secret, and an examination made at the instance of the defendant, such exhumation and examination ought not to be made, in a similar case, at the instance of the state. To do so would not only be manifestly unfair, but would be such a partial discrimination against the defendant as would shock the moral sense of all fair-minded men. And yet to refuse to the state authority on a proper showing and in a proper case, so to do, would in many cases permit the most abandoned criminal to go unwhipped of justice, unless such action was or might be taken by a justice of the peace, and the law, in its weakness and impotence, to be made a byword and pure mockery.

To say that the district court has no power to order, and if need be with its full power compel, such an exhumation as was here sought, is to say that no court can do so. It presents the singular anomaly that in a merely suspected case of unnatural death, where no charge of murder is pending, and in a proceeding where no punishment can be meted out, an examination may be had. but that where the charge is made, and it is an issue of life or death, none can be had. It is, as was contended by the state, allowed where the proceeding is preliminary and unimportant. and denied where it is vital. It is, under the state's contention, conceded to the most obscure judicial officer known to our system in advance of a trial, and denied on the trial to our chief and most important court sitting as such. The power inheres in such court, or there is, in such a case as was here presented, no such authority anywhere.

On rehearing, the court says that it had again reviewed the question from every point of view, and had arrived at the settled conviction, which had been rather strengthened by its subsequent investigation, that the original opinion was right, the law, and that it ought to stand.

The court believes that whenever it shall be necessary to the ends of justice, an examination of the inanimate body of the deceased in the jurisdiction of the court should be made, and that the court has the power, and should exercise the right to require the exhumation made.

If it could be said that there was no precedent for action, it can never be said again, because the rule and precedent is here established.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Boston Medical and Surgical Journal

February 4

1 *Internal Concealed Hemorrhage. J. R. Torbert, Boston.
2 Feeding of the Infant in Health. D. R. Brown, Salem, Mass.
3 Congenital Neuroglia Tissue Nests in the Meninges of the Spinal Cord, with Report of a Case Associated with Other Congenital Defects. C. T. Ryder, Boston.
4 *Osmic Acid Injections for Relief of Trifacial Neuralgia. H. H Germain, Boston.

1. **Internal Concealed Hemorrhage.**—Torbet describes the process by which this condition is produced and reports cases, of which one is of special interest from a diagnostic stand point and as showing what can be accomplished in the line of stimulation, as well as with regard to the choice of operation in emptying the uterus. The plan of gradually letting up the pressure proved in this case particularly successful. He thinks it safe to say that if routine examination of the placenta and membranes were practiced, more cases of small detachments would be discovered than are now found. He discusses the etiology, in regard both to exciting and to predisposing causes, the symptoms and diagnosis, differential diagnosis, prognosis and treatment. Quiet may be induced by morphin. In the mild cases nearly two-thirds of the patients will go to term, or labor will be completed without untoward results. While agreeing in the main with Holmes' contention, that aggressive action will save most lives, there is a large group of cases in which the patient is in extremely poor condition, and here there is sufficient evidence in favor of holding off until by stimulation the patient can be got into better shape for interference. The author considers that the tampon has a limited, but exceedingly practical, use in extreme cases, in softening up the hard cervix, when the uterus has reached its limit of distention. He does not agree with Holmes that in all cases in which version is selected, extraction should be immediate, on account of the partially emptied uterus failing to contract leading to further hemorrhage; for in one of his cases, in which the vagina was packed to soften the os, and in which the membranes were ruptured with a catheter, the fluid being allowed to run out slowly, while at the same time the uterus was briskly massaged, the uterus contracted well; there was no further hemorrhage. He controlled the uterus by holding it for some hours after delivery, and deemed it unnecessary to pack the uterine cavity. He draws the following conclusions:

Internal concealed hemorrhage is a comparatively rare complication of pregnancy.

Unless diagnosticated early it has a serious prognosis.

It occurs generally in the last two months of pregnancy.

The diagnosis is made by careful examination both of the mother and of the infant within the uterus.

The importance is urged of an examination of all obstetric patients in the last months of pregnancy and of keeping close watch on both the maternal and fetal pulse during the progress of the labor.

Palpation is important in diagnosticating these cases, as the uterus is much increased in size and of a board-like consistency.

The appearance of acute anemia with manifestations of shock in a patient in the later months of pregnancy should always suggest the possibility of internal concealed hemorrhage.

Early diagnosis is essential in offering a favorable prognosis to the mother; that of the infant is bad.

4. **Osmic Acid Injections for Trifacial Neuralgia.**—Germain briefly reports eleven cases and concludes: 1. Osmic acid injections will relieve trifacial neuralgia for a longer or a shorter period of time. 2. Relief from pain is not immediate, but follows in a few days after injection. 3. It may be followed by a certain amount of necrosis of tissue at the point of injection. 4. It is little if any better than other peripheral operations. 5. It is best used in a 2 per cent. solution injected directly into the nerve, using a glass syringe and a platinum needle. 6. It is to be used only in purely sensory nerves, as its employment in mixed nerves is followed by motor paralysis. In regard to the latter he pleads for greater conservatism and the treatment by hygienic measures and astringents. He gives the indications for the complete removal of adenoid vegetations as follows: (1) Nasal obstruction, causing mouth breathing and its sequelæ; (2) recurring attacks of earache; (3) stupidity and inability of the children to concentrate attention; (4) stunted growth, and in all cases of purulent otitis media in children; (5) in infants whose inability to nurse is due to adenoids, otherwise he never operates on infants under 1 year of age, and believes it a crime to do so. He describes the operation.

Medical Record, New York

February 6

5 *The Eye of Yesterday and of To-day. F. Valk, New York.
6 Some Serious Lapses in Administrative Hygiene. H. Wakefield, New York
7 Acute (Hemorrhagic) Encephalitis, with Report of Cases. G B. Hassin, Chicago.
8 *Factors in the Etiology of a Common Cold. R. C. Brown, Milwaukee
9 Case of Interstitial Pregnancy. B. M. Baker, Norfolk, Va.

5. **The Eye.**—Valk gives instances of the knowledge of the physiology of the eye in the days of Rush, and reviews the most notable advances in diseases of that organ. He describes as chief among them, the prevention and treatment of ophthalmia neonatorum. The addition of spirit of nitrous ether to the silver solution keeps it always fresh by preventing precipitation of oxid. Valk's formula is: Silver nitrate, 5 grains (0.32 grams); spirit of nitrous ether, 2 drams (6.75); water, 6 drams (22.50). He particularly emphasizes the importance of cleanliness, asepsis and gentleness. He refers to the implication of the eye from systemic infection following an acute attack of gonorrhea, and points out the advance made in the practical abolition of the postdiphtheritic paralysis of accommodation, subsequent to the introduction of the antitoxin treatment, as demonstrated by the investigations by Bylsena of Middleburg, Germany. He urges the more frequent use of the ophthalmoscope by the general physician, and discusses the question of how much knowledge of eye diseases the general practitioner should be taught in the school, pointing out that the needs of the city practitioner, who has ready access to eye specialists, are different from those of the country practitioner, who may often be compelled to deal with cases calling for some special knowledge. He therefore points out some general objective symptoms by which patients may be treated so as to prevent serious complications or serious impairment of vision. There are certain symptoms that suggest a "snap diagnosis," which is all right and a useful shortcut if subsequently verified by proper examination. For instance, if there is no photophobia it is doubtful if the disease involves important structures. It will probably be found to affect only the conjunctiva and to require only astringents. If, however, photophobia exists, involvement of deeper structures is at once suggested, and the early use of atropin may prevent serious mischief later. He discusses keratitis in like manner. He reviews the improvement in the eye wards, now well lighted and ventilated, the fall in percentage of failures after cataract operation, and the advantages produced by the use of cocain. He discusses the question of refraction, eye motility, and the reflex effects of eyestrain—in which while admitting its importance, he deprecates what he considers the extravagant propositions of some—at considerable length, and also the subject of diplopia. The article is eminently suited to the needs of the general practitioner.

8. **The Common Cold.**—Brown discusses the character of a common cold, more particularly with regard to the prevailing view that it is an infection, either specific or due to lowered resistance of the body laying it open to attack by innumerable micro-organisms, and reviews both these theories critically. He says that before the human race had been accustomed to clothes and overheated houses colds were probably infrequent. Exposure to cold and catching cold are not synonymous. When the body is put to an effort to conserve its heat, as in exposure to cold, there is not much danger of catching cold, but when the body is put to an effort to lose its heat, or is in other words overheated, there is great danger. The greatest likelihood of colds comes when the body is at one time overprotected and at another underprotected. When a skin area which is usually overprotected, is exposed to a draft, an over-impulse is conveyed to the vasomotor cen

ter, an exaggerated response is sent out, and the peripheral blood vessels are contracted over a large area. If, under these conditions, the temperature is taken, it will be found to have risen slightly. The body which was attempting to lose heat, finds itself further embarrassed as the radiation from a considerable portion of the skin has been shut off. The turbinates being a means by which heat is lost, it is not strange that, under the circumstances, vasomotor impulses should be sent to them, and that the tortuous blood vessels of these bodies should be dilated to the point of overcongestion. On this theory, both the so-called habit of taking cold and treatment for prevention of colds can be explained. The more often the nerve impulses are sent through certain channels, the easier does the impulse follow that channel, so that in a sensitive person the slightest exposure will result in a cold in the head. On the other hand, through the intelligent use of clothing, right living, and the proper use of baths, the skin may be kept in such a condition that it will send only normal impulses. The author therefore prefers the view of the vasomotor origin of cold.

New York Medical Journal

February 6

10 Tuberculosis. J. D. Bryant, New York.
11 *Amnesia from a Medicolegal Standpoint. A. Gordon, Philadelphia.
12 Care and Treatment of Dependent, Neglected, Crippled and Deformed Children. N. M. Shaffer, New York.
13 *Prophylactic Inoculations Against Typhoid. H. Shoemaker, Philadelphia.
14 *Sequelæ of Adenoids. A. J. Herzig, New York.
15 Epiploitis Following Radical Cure of Inguinal Hernia. C. G. Cumston, Boston.
16 *Physiologic Action of Strong Cocain Adrenalin Solutions. J. Leshure, New York.
17 Keeping and Handling of Rats for Laboratory Purposes. G. W. McCoy, San Francisco.
18 Clinical Gonorrhea in the Male (concluded). M. Huhner, New York.
19 Care of Crippled Children of the Poor by the State of New York. J. P. Fiske, New York.

11. **Amnesia.**—Gordon details the case of Frank Endrukat, who committed murder in 1908 and shot himself in the brain, but entirely recovered, the bullet remaining in the skull. All memory of the period of the crime and the events relating to it had disappeared, but his memory of events preceding persisted, while all his faculties after the suicidal attempt appeared intact. Gordon discusses the problem of amnesia and how to prove whether amnesia is general or simulated. Memory is the result of impression of facts on the cerebral tissue. It is a general function of the intellect, which consists in reproducing images, ideas, emotions and sensations previously acquired. Two main elements demand consideration, the fixation of facts, images, etc., and their reproduction. The external manifestation of memory impressions depends on the will of the individual himself. Memory may therefore be admitted or denied, but real diminution or complete loss is well known in cerebral nosology. From a pathogenetic standpoint amnesia may be functional or organic as regards its evolution; it may be temporary or permanent, certain or progressive, periodical or intermittent. Organic amnesias as in the dementias are usually progressive and permanent, affecting first the recent events and proceeding toward the more distant and firmly fixed. In functional disturbances, memory may be lost for a certain group of ideas or for a fact or facts occurring during a certain period of life. In the latter case amnesia may extend to the period of time immediately preceding a certain forgotten event (retrograde), or following it (anterograde). In exceptional instances it may be general. The essential distinction between the organic and functional amnesias lies in the fact that the former are progressive and intimately associated with the gradual deterioration of the psychic function, while the latter are sudden in their onset. The former are incurable, the latter may be curable. When a crime is committed by one suffering or having suffered from any of these forms of amnesia the first step is to determine whether the loss of memory is dependent on an irreparable cerebral lesion or is functional, as, for instance, in hysteria with periodical attacks of double consciousness. The author discusses various classes of cases in which impulsive acts are committed without the individuals having the least recollection thereof. In epilepsy, a convulsive attack may be followed by an impulsive act of which no recollection remains. Gordon discusses the legal bearings of these amnesias, paying special attention to those of hysteria, multiple personality, intoxication, insolation and traumatism. He asks: Does or does not the loss of memory for a former criminal act, of which the author was then responsible, destroy his responsibility? This question, he says, is purely legal, and the expert should leave it entirely to the court. From a medical point of view, whatever the degree of loss of memory may be, the amnesic can not be determined, as by virtue of the amnesia itself the patient is incapable to present his defense properly, and consequently to confer with counsel on an act of which he is totally ignorant. This is the process of the arguing presented by him at Endrukat's trial.

13. **Typhoid Fever Prophylactic Inoculations.**—Shoemaker summarizes the principal papers that have advanced this subject to its present status, and sets forth briefly his own experiences with prophylactic inoculation, which lead him to the conclusions that the evidence of bacteriolytic and bactericidal activity higher than the normal and the presence of agglutinin can be obtained from the serum of those who have been inoculated.

14. **Adenoids.**—Herzig discusses the etiology and heredity, the pathology, diagnosis, symptoms, sequelæ, and indications for operation.

16. **Cocain Adrenalin Local Anesthesia.**—Leshure summarizes his article as follows:

1. To induce a maximum degree of local anesthesia and ischemia, with a minimum of general drug absorption, it is necessary to use solutions of high density, which do not readily enter the larger blood and lymphatic glands.

2. The diluting effect of the mucous membrane secretions must be borne in mind, and cotton wound applicators should be frequently changed, and freshly charged with the cocain-adrenalin solution.

3. Before beginning to operate one should carefully test every part of the field with a probe to determine whether the anesthesia is complete. It is difficult to anesthetize when bleeding has once begun, and the patient will greatly appreciate the extra effort made to spare him needless pain.

Albany Medical Annals

January

20 *Appearance of Glycuronic Acid in Certain Conditions of Diminished Oxidation. C. W. L. Hacker, Albany.
21 *Clinical Study of Hypernephroma, with Pathologic Reports. G. E. Beilby, Albany.
22 *Influence of the Reduction of Kidney Substance on Nitrogenous Metabolism. R. M. Pearce, Albany.
23 *Presence of Nephrotoxic Substances in the Serum of Animals with Experimental Nephritis. R. M. Pearce and H. P. Sawyer, Albany.
24 *Study of Experimental Reduction of Kidney Tissue with Special Reference to the Changes in that Remaining. J. A. Sampson and R. M. Pearce, Albany.
25 *Relation of Lesions of the Adrenal Gland to Chronic Nephritis and to Arteriosclerosis: An Anatomic Study. R. M. Pearce, Albany.
26 Physiochemical Study of Salt Elimination in the Urine of an Individual with General Edema of Obscure Origin Followed by Cure. H. C. Jackson and A. W. Elting, Albany.
27 *Occurrence of Spontaneous Arterial Degeneration in the Rabbit. R. M. Pearce, Albany.
28 Effect of Conditions on the Latent Period and Rate of Aseptic Postmortem Autolysis During the First Ten Hours. H. C. Jackson, Albany.
29 Inferior Longitudinal Bundle and the Geniculo-calcarine Fasciculus. L. Archambault, Albany.
30 Two Cases of Primary Carcinoma of the Appendix. G. W. L. Hacker, Albany.

20. Published in The Journal, Jan. 25, 1908, p. 252.

21. Published in *Surgery, Gynecology and Obstetrics*, September, 1908.

22. Published in the *Journal of Experimental Medicine*, September, 1908, and abstracted in The Journal, Oct. 3, 1908, p. 1184.

23. Published in the *Journal of Medical Research*, October, 1908, and abstracted in The Journal, Nov. 28, 1908, p. 1903.

24. Published in the *Journal of Experimental Medicine*, November, 1908.

25. Published in the *Journal of Experimental Medicine*, November, 1908, and abstracted in The Journal, Dec. 12, 1908, p. 2089.

27. Published in The Journal, Sept. 26, 1908, p. 1055.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

January

31 Comparison of Lesions Found Postmortem in Cases Diagnosticated Clinically as Eclampsia and Toxemia of Pregnancy. J. E Welch, New York.
32 Cardiac Disease as a Complication of Pregnancy. G. H. Ryder, New York
33 When Shall the Operation for Tubal Pregnancy be Performed? B F Baer, Philadelphia
34 *Delayed Operation in Terminated Ectopic Pregnancy. C A Stillwagen, Wilkinsburg, Pa
35 *Psychotherapy and Re Education E Garrigue, New York
36 *Abdominal Surgery without Detached Pads or Sponges H. S Crossen, St. Louis
37 *Typhilitis J. A Lyons Chicago
38 *Vaginal Cesarean Section in Eclampsia. O P. Humpstone, Brooklyn
39 Splenic Anemia of Infancy. A D. Smith, Brooklyn

34. Abstracted in The Journal, Nov. 7, 1908, p. 1629.

35 **Psychotherapy.**—For Garrigue, the keynote of psychotherapy is moral re education, the awakening of the inward perception of what must be done and the cultivation of courage and will power to enable the patient to do it, for the patient is the one who must do the work. The physician can and must point out the road and be guide and director to the goal of health, but the moral responsibility of getting there and remaining there lies with the patient. No other than the patient can do the real work of recovery any more than one student can gain an education for another. It involves individual responsibility, individual effort, and individual intelligent work.

36. Abstracted in The Journal, Oct. 17, 1908, p 1355.

37. Abstracted in The Journal, Oct. 24, 1908, p. 1459.

38 **Eclampsia.**—Humpstone's paper urges eclampsia before or during labor without complete shortening of the cervix as an important indication for anterior vaginal hysterotomy. He discusses the difficulties and dangers of the operation, the principal dangers being hemorrhage and sepsis. He considers that the absence of reports of evil results in subsequent labors is evidence that its effects are not deleterious. He reports five cases.

Annals of Ophthalmology, St. Louis

January

40 *Hereditary Blindness and Its Prevention C Loeb St. Louis
41 Comparisons Between the Eyes of Insects and of Man P P. Calvert, Philadelphia
42 Ophthalmic Origin of Otic Disturbances with the Cerebellar Control of the Eyes E. P. Lewis, Buffalo
43 *Beginning Signs of Retinal Angiosclerosis. W. Reber, Philadelphia
44 *Gross Obstructive Vascular Disease in the Retina C M Harris Johnstown, Pa
45 Embolism of a Macular Artery and Thrombosis of Superior and Inferior Retinal Arteries in a Case of Embolic Softening of the Brain W T Shoemaker, Philadelphia

40 **Hereditary Blindness.**—Loeb's attention was called to the family history of an inmate of the Missouri School for the Blind, which showed the presence of cataract in all the members of the family for at least five generations. He discusses the question whether or not there is such a thing as hereditary blindness, and says that on purely theoretical grounds it can not be denied that it is at least a possibility, since the eye, like the other organs, is the resultant of long ages of evolutionary processes He publishes a letter sent out to 1,750 oculists asking for information on certain points, and to which 152 replies were received These he analyzes and finds that 84 are opposed to the marriage of two blind persons, while 52 are opposed to the marriage of a blind with a seeing person. He discusses the nature of heredity, the various forms of disease which his reported cases tend to show may be hereditary, and the best method of preventing hereditary blindness He emphasizes the following points:

1 All whose life work brings them into relationship with the blind should be aware of the dangers connected with the marriage of a blind person

2 The blind themselves should be warned of the danger to their children in case of marriage

3. A distinction must be made between hereditary and non hereditary forms of blindness

4 Legal assistance should be invoked to prevent blind people from marrying

5 This law should apply only to those cases of blindness in which heredity has been proved With the exception of glaucoma and cataract, these diseases usually manifest themselves at or before the marrying age

6 A law compelling every person to have an oculist's certificate before marriage, though idealistic, would be impracticable.

7 The general public should be educated in the dangers arising from hereditary blindness A lengthy appendix (to be continued) publishes the replies received to the before mentioned circular letter.

43. See Abstract No. 136.

44 Abstracted in The Journal, Oct. 17, 1908, p. 1457.

Annals of Surgery, Philadelphia

January

46 *Studies in Cancer—Historical and Critical J G Mumford, Boston
47 *Serum Reaction in Cancer H H Janeway, New York
48 Newer Conceptions of Operative Technic in Cleft Palate and Harelip J R Eastman Indianapolis
49 *Aberrant Thyroid B C Cushway, Chicago
50 *Suppurative Pericarditis E Eliot, New York
51 Restoration of the Perineal Portion of the Urethra After Destruction by Fracture of the Pelvis H Cabot, Boston
52 Catheter Fever L J Hammond, Philadelphia
53 Cruroscrotal Hernia A H Ferguson, Chicago
54 Giant Cell Sarcoma of Forearm A C Wood, Philadelphia
55 Modification of the Bradford Frame for Treatment by Suspension of Fracture of the Femur in Young Children D Silver, Pittsburg
56 Portable Traction Apparatus for Treating Fractures of the Femur and for Various Orthopedic Operations C M Echols, Milwaukee
57. Intestinal Intussusception Complicating Typhoid O C. Smith, Hartford, Conn
58 Modified Crile Tube for Direct Transfusion of Blood T N. Hepburn, Hartford, Conn

46. **Cancer.**—Mumford reviews the story of cancer as it has been developed in the writings of nearly two thousand years, and shows that the two aspects of the problem, the cause and the cure, have constantly exercised investigators throughout this long period.

47. **Serodiagnosis in Cancer.**—Janeway describes the method of serodiagnosis and analyses a series of twenty cases, from which he concludes that in suspected cases of cancer the patients should have the serum tested against the normal corpuscle emulsion. If negative it would be advisable to make a second and more comprehensive test.

49 **Aberrant Thyroid.**—Cushway says that the following points may suggest the presence of aberrant thyroid·

1 A tumor located most frequently in the anterior or lateral triangles of the neck

2 Tumor mass may increase in size during period of menstruation

3 Tumor may be first noticed and increase in size at puberty

4 Greater frequency in women

5 Growth usually slow and without attendant symptoms unless cyst formation takes place

50. **Suppurative Pericarditis.**—Eliot emphasizes strongly his belief that in every case of pyopericarditis the patient, if not moribund, should be operated on, and that in those cases in which a general anesthetic can not be tolerated, operation may yet be successfully carried out under cocain or some other suitable local anesthetic He summarizes a series of cases from the literature and adds one of his own.

Archives of Otology, New York

December

59 The Membrana Tectoria and the Theory of Tone Perception G E Shambaugh, Chicago
60 Cerebellar Tumor Involving the Auditory Nerve G L Biggs, London
61 Negative Pressure as a Therapeutic Agent in Diseases of the Nasal Accessory Sinuses, Throat, Ear and Mastoid E R Lewis Dubuque, Iowa
62 Phlebitis without Thrombosis as Cause of Obliteration of Sinus in Children S Kramm, Berlin
63 Treatment of Acute Middle Ear Suppuration, with Nipple Shaped Perforation, by Aspirating Pus into the External Meatus O Muck Essen, Prussia
64 Epidermic Cysts Following Transplantation in Cavity Produced by Radical Mastoid Operation W. Schoetz, Heidelberg Germany
65 Functional Examination of the Organ of Hearing in Deaf-Mutes G Alexander and G W Mackenzie, Philadelphia
66 Structure and Function of the Epithelium in the Sulcus Spiralis Externus G E Shambaugh Chicago
67 Arterial Hemorrhage from the Auditory Meatus in a Child, After a Brief Attack of Acute Otitis Media Following Tonsillitis with Tonsillar Abscess J A Spalding, Portland Maine
68 Sinus Thrombosis with Atypical Symptoms Operative and Pathologic Findings S J Kopetzky, New York
69 Unsuspected Necrosis of the Petrous Bone Meningitis Death Coexisting Mastoid Suppuration and Extradural (Cerebellar) Abscess H Hastings Los Angeles Cal
70 Bacterial Suspensions in Treatment of Aural Suppuration R Connor, Detroit, Mich

Buffalo Medical Journal

January

71 Mineral Nutrients, Air, Water and the Salts. H. R. Hopkins, Buffalo.
72 Renal Decapsulation for Puerperal Eclampsia. W. E. Jones, Rochester, N. Y.
73 Vaccination for Smallpox. Should It be Discontinued and Abolished? J. B. Colegrove, Washington, D. C.
74 New Duty of the Medical Profession: The Education of the People in Scientific Medicine. *S. W. S. Toms, Nyack, N. Y.*

Bulletin Johns Hopkins Hospital, Baltimore

January

75 John James Wepfer, a Renaissance Student of Apoplexy. J. E. Donley, Providence, R. I.
76 Dissecting Aneurism. W. G. MacCallum, Baltimore.
77 *Persistent Bacteriuria. J. T. Geraghty, Baltimore.

77. **Persistent Bacteriuria.**—Geraghty reports four cases and discusses the nature of the condition. He draws the following conclusions:

1. Bacteriuria, when persistent, is always due to organisms of slight pathogenicity.
2. Bacteriuria due to the *Bacillus coli communis* produces an acid urine. When due to *Staphylococcus albus* it may be alkaline and give rise to a troublesome phosphaturia.
3. It is secondary to some focus in the urinary tract or neighboring organs.
4. It may persist indefinitely despite all treatment without producing any inflammatory reaction on the part of the vesical mucosa.
5. The results of vaccine therapy are entirely negative.

Denver Medical Times and Utah Medical Journal

January

78 Summation of Data in Regard to the Appendicular Artery in Sixty-five Personal Dissections. B. Robinson, Chicago.
79 Dr. John Brown. E. S. Pratt, Denver, Colo.
80 *Use and Abuse of Salt with Food. H. O. Beeson, Calcite, Colo.
81 Gymnasium and Training in Personal Hygiene as Factor in Overcoming Abnormalities of Health During Infancy and Puberty. C. G. Plummer, Salt Lake City, Utah.

80. **Use and Abuse of Salt.**—Beeson does not share the common belief that salt is an aid to digestion, and holds that the universal use of salt is no argument that it is necessary. Its actual use depends on the fact that small molecules serve to hold in solution the various colloid and crystalloid materials. Its abuse lies in the fact that in excess it interferes with digestion, inhibits glandular action, retards secretion, lays the foundation for the reaction of succorrhea and secondary infection and taxes the emunctories, thereby diminishing functional efficiency. He discusses its influence in delaying or perverting digestion and describes his experience in obtaining relief within a week from a ten years' progressive fermentative intestinal indigestion, by cutting out all supplementary salt. He concludes that the claim that salt is an aid to digestion is not founded on experiments or observations, but solely on perverted taste. The taste for salt with food is acquired. Infants do not get much of it. Wild animals never take it with food, and only those that eat vegetable food containing a minimum of salt ever seek it.

Dominion Medical Monthly, Toronto

January

82 Two Cases of Facial Hemiatrophy. G. Chambers, Toronto.

Journal of the Tennessee State Medical Association, Nashville

January

83 Ureteral Catheterization. R. A. Barr, Nashville.
84 Lithemia. T. O. Burger, McMinnville, Tenn.
85 Affections of the Blood Vessels of the Liver. R. J. McFall, Cumberland City, Tenn.

Texas State Journal of Medicine, Fort Worth

January

86 The Louisiana System of Hygienic Education. F. J. Mayer, New Orleans.
87 *Division of Fees. B. Saunders, Fort Worth.
88 An Impermeable Esophageal Stricture. Operation. Recovery. J. S. Wooten, Austin.
89 Diagnosis and Office Treatment of Some Gynecologic Patients. J. W. Torbett, Marlin.
90 Hypernephroma of the Kidney. A. L. Hathcock, Palestine.
91 Treatment of Extensive Burns. E. J. Neathery, Sherman.

87. Abstracted in THE JOURNAL, Oct. 31, 1908, p. 1536.

Journal of Cutaneous Diseases, New York

January

92 *Congenital Alopecia as an Expression of Atavism. J. N. Hyde, Chicago.
93 Study of *Acnitis with Report* of an Extensive Case. J. F. Schamberg, Philadelphia.
94 Use of Liq[illegible] Dioxid. J. Zeisler, Chicago.

92. **Congenital Alopecia.**—Hyde discusses the following conditions and reports notable cases:

1. Complete and universal absence of hair at birth, not succeeded later in life by a piliary growth. This is believed to be an intra-uterine atrichia due to a failure of development of the hair-pouches.
2. Universal congenital hypotrichiasis, in which at birth hairs exist in all regions of the body, but later fail to be succeeded by filaments normal in length, vigor, color, and texture. Two sub-varieties of *this condition have been recognized:* (a) *the infant* at birth is provided with the relatively long hair of most normal infants; this in due time falls and is replaced by a scanty down which later in life fails to ensure a normal hirsuteness of the scalp; (b) after birth the infant fails to lose the temporary hair of the scalp, which persists, but later develops merely a scanty or ill developed piliary growth.
3. Complete or partial absence of hair at birth in definitely circumscribed regions, such as the scalp, the brows, the pubes, or the axillæ. The anomaly is rare, and persistence through life still rarer. Many published observations are lacking in detail of special importance.

Dentists have given scanty attention to the hair and nails; physicians have often neglected to describe the dental conditions. The absence of hair may affect one, several, or all regions of the body. In the records of congenital alopecia individuals are cited, not only of one family, but of generations of a single family, who have been similarly affected. Hyde discusses coincident anomalies, of which those of the eyes appear to be the rarest. He considers the condition in the light of comparative pathology and embryology.

Louisville Monthly Journal of Medicine and Surgery

January

95 Cardiovascular Effects Induced by the Use of a Drug not Therapeutically Understood. W. H. Rubovits, Chicago.
96 Hyperchlorhydria and Its Treatment Based on Animal Ex*periments. M. M. Portis, Chicago.*
97 Surgery of the Stomach. J. G. Sherrill, Louisville, Ky.
98 *Why Operations for Bunion Fail, with a Description of One that Does Not. J. L. Porter, Chicago.

98. Published in the *Lancet-Clinic*, Dec. 26, 1908, and abstracted in THE JOURNAL, Jan. 16, 1909, p. 248.

Memphis Medical Monthly

January

99 More About Cancer of the Rectum. G. B. Evans, Dayton, Ohio.
100 Psychotherapy—Its Relation to the Medical Powers of Nature. J. S. Rawlins, Danceyville, Tenn.
101 Anasarca and Edema. L. Leroy, Memphis.
102 Social and Business Side of Medicine. L. E. Moore, Searcy, Ark.
103 Glioma of the Retina. J. F. Rowland, Hot Springs, Ark.

Northwest Medicine, Seattle, Wash.

January

104 *Intracranial Complications of Mastoid Disease. W. House, Portland, Ore.
105 Appendicitis in Pregnancy. E. O. Jones, Seattle, Wash.
106 *The Emmanuel Movement and Its Relation to Medicine. F. Hinman, Spokane, Wash.

104. **Mastoid Disease.**—House discusses the intracranial complications of this disease. He describes the anatomy of the auditory canal and the mode of development of cranial complications on the blocking up of the secretion from the middle ear which takes place when the Eustachian tube ceases to be patulous. He summarizes the symptoms of various possible complications as follows, evidence of middle ear being presupposed in all, stating, at the same time, that any pulse in the presence of mastoid or middle-ear disease which becomes slower than normal is a danger signal that must not be disregarded:

EXTRADURAL IRRITATION.—Headache, not localized, but worse on same side of skull. Vertigo, usually slight. Special sense symptoms: Word deafness or blindness; partial aphasias; perversions of smell. Psychic abnormalities; pupillary reaction slower on same side than its fellow; knee-jerks increased, but equally.

EXTRADURAL ABSCESS.—Increase in subjective symptoms of above. Appearance of septic symptoms. Increase in opposite knee-jerk. Pupil on same side slower, and in dim light larger than its fellow. Slow pulse. Sighing respiration possible.

ABSCESS OF CEREBRUM.—Increase of all signs of extradural abscess: Great headache; stupor and hebetude; pinched countenance; very slow pulse, usually below 56, dropping as pressure increases as low as 26. Numbness of muscles of opposite side. Partial hemiplegia. Impaired deglutition. Irregular respiration. Marked difference in knee-jerks; opposite one greater. Wide pupils; pupil on same side the larger; choked disc or optic neuritis possible.

CEREBELLAR ABSCESS.—General signs of pus as in cerebral abscess: Nystagmus; sensation of rotation of objects; intense vertigo; cerebellar fit. Prior to death spread of infection may bring on signs of meningitis.

Meningitis.—Septic symptoms very marked: rapid pulse; irregular respirations; large pupils; semiunconsciousness or unconsciousness; rigid neck. Cranial nerve invol
bismus, conjugate deviation of orbits, etc
Cheyne Stoke's respiration, high fever and death.

106. **The Emmanuel Movement.**—Hinman discusses this movement and holds that it can do a great deal of good if wisely executed and carefully controlled. It does not necessarily encroach on the duties of the medical profession.

Therapeutic Gazette, Detroit

January

107 Results Following Operations. J. G. Clark, Philadelphia.
108 Alcoholism and Its Treatment. W. House, Portland, Ore.
109 *Shall We Bleed?—Shall We Blister? R. L. Hinton, Prescott, Ark.
110 Actions of Bile and Some of Its Constituents on Intestinal Peristalsis and the Circulation. I. Ott, Easton, Pa., and J. C. Scott, Talma, Ind.
111 *Method of Protecting Abdominal Wounds Against Infection by Means of a Peritoneal Tube, with Special Reference to Its Use in Connection with the Gridiron Operation in Septic Cases. G. Torrance, Birmingham.

109. **Bleeding and Blistering.**—Hinton reports cases of pneumonia, catarrhal pneumonia and congestion of the bowels in which bleeding and blistering were used to advantage. He says that if the physician has decided that the case is suitable for bleeding he must have confidence in the remedy and use it boldly, not sparingly, or the patient will fail to get its benefit. He discusses the objection of blood letting as a drain on the system and has never yet been able to see in reason, and certainly not by observation and experience, that the disgorging and unclogging of an important vital organ by removing a mass of impure blood, tends to the much-dreaded prostration.

111. **Protecting Abdominal Wounds Against Infection.**—Torrance describes his method as follows: The ordinary "gridiron" operation is done, and the peritoneum is then caught up and incised in the line of the skin incision; each side of the peritoneal wound is then drawn out and sutured to the skin on both sides with a running suture of catgut or a few interrupted sutures. Retractors may then be put in and the adhesions broken up and the appendix removed; one or two small drains are now placed, and each end of the incision closed around them by means of one or two through-and-through silk worm-gut sutures. To insure better approximation of the deep layer of muscles a silkworm-gut suture may be placed on either side of the skin incision before the peritoneum is opened, and left to be tied when the operation is completed.

Yale Medical Journal, New Haven, Conn.

January

112 Early Diagnosis of Gallstones. R. H. Fitz, Boston
113 Heredity and Environment F. N. Braman, New London, Conn.
114 *Grocco's Sign G. Blumer, New Haven, Conn.
115 *Bearing of Recent Investigations on the Treatment of Typhoid and Its Complications. C. J. Foote, New Haven, Conn.

114. **Grocco's Sign.**—Blumer thinks it must be concluded, after a critical survey of the facts at hand, that paravertebral dulness, when decidedly triangular in shape, is fairly distinctive of pleural effusion when associated with signs of intrathoracic diseases. It also seems certain that it is of distinct value in the recognition of small effusions, and of encapsulated effusions, provided that these are in contact with the spinal column. When the triangle does occur as a result of disease below the diaphragm, it is usually symmetrical, differs in shape from the typical triangle of pleural effusion, and should be distinguished without trouble on this account, and on account of the presence of symptoms pointing to intra-abdominal disease.

115. Abstracted in The Journal, July 25, 1908, p. 339.

American Journal of Urology, New York

January

116 Some Cases of Tuberculosis of the Kidneys of Diagnostic Interest. L. Casper, Berlin, Germany
117 Indications for and Technic of Partial Nephrectomy. C. G. Cumston, Boston
118 Sounds Versus Dilators A. Ravogli, Cincinnati
119 Eyton Robinson's Three Ureteral Isthmuses. T. B. Wood, Chicago

West Virginia Medical Journal, Wheeling

January

120 Indications for and Comparative Methods in Removal of the Eye. W. K. Butler, Washington, D. C.
121 Treatment of Perforative Peritonitis R. J. Reed, Wheeling.
122 Complications and Sequelæ Affecting the Respiratory and Circulatory Systems R. J. Hersey, Wheeling
123 *Nervous and Mental Complications of Influenza J. R. Bloss, Huntington
124 Nose, Throat and Ear Complications of Influenza. T. W. Moore, Huntington
125 Diagnosis and Treatment of Typhoid Fever. L. L. Edgell, Keyser
126 Minor Things in Medicine. J. F. Bigony, Hinton.

123. Abstracted in The Journal, June 6, 1908, p. 1933.

Vermont Medical Monthly, Burlington

January

127 Differential Diagnosis of Scarlet Fever, with Special Reference to the Scarlatiniform Eruptions. G. R. Pisek, New York
128 Colitis, Sigmoiditis and Rectitis, and Importance of the Proctoscope in Their Treatment. T. C. Hill, Boston
129 Complications of Pneumonia G. S. Bates, Morrisville, Vt.

University of Pennsylvania Medical Bulletin, Philadelphia

January

130 *Some Newer Facts in Connection with Diabetes Mellitus. The von Noorden Diet Tables J. Tyson, Philadelphia
131 Operative Treatment of Papillo Edema (Choked Disc), with Special Reference to Decompressing Trephining. G. E. de Schweinitz and T. B. Holloway, Philadelphia
132 Variations in the Arteries of the Human Body G. Fetterolf, Philadelphia
133 *Tumors of the Salivary Glands J. Speese, Philadelphia

130. **Diabetes Mellitus.**—Tyson discusses acidosis and other important facts which have increased the efficiency of the symptomatic treatment. He describes the following test for acetone: To 15 c.c. of urine add 1 c.c. of acetic acid and a drop of strong sodium nitroprussid solution. Float on top of this from 5 c.c. to 10 c.c. of ammonium hydrate. The end-reaction is shown by a beautiful purple at the line of contact, communicated to the urine if the tube is shaken. He cites the important practical conclusions revolutionizing in some respects our treatment of diabetes but verified by experience, that in very bad cases, so far from carbohydrate food being harmful, it becomes actually necessary in order to secure a proper proteid metabolism, and prevent the circulating and fixed proteids from breaking up into the volatile acids which contribute to acidosis and diabetic coma. He discusses the von Noorden diet table.

133. This article also appears in the *Pennsylvania Medical Journal*, January, 1909.

Pennsylvania Medical Journal, Athens

January

134 *Some Obstetrical Kicks J. H. Wilson, Beaver.
135 Tumors of the Salivary Glands J. Speese, Philadelphia
136 *Beginning Signs of Retinal Angiosclerosis W. Reber, Philadelphia
137 *Gross Obstructive Vascular Disease in the Retina. C. M. Harris, Johnstown, Pa.
138 *Relation of the Faculty of Hearing to the Faculty of Speech G. Hudson-Makuen, Philadelphia
139 Importance of First Aid Dressings in Wounds of Civil Life. G. W. Guthrie, Wilkes Barre
140 *Need of Better Provision for the Treatment of Mental Disease in Its Early Stage. J. M. Mosher, Albany, N. Y.
141 Medical Requirements in Pennsylvania A. R. Craig, Philadelphia
142 Random Thoughts on Medical Organization. W. B. Konkle, Montoursville.

134. Abstracted in The Journal, Oct. 3, 1908, p. 1179.

136. Abstracted in The Journal, Oct. 17, 1908, p. 1357, and also published in *Annals of Ophthalmology*, January, 1909.

137. Abstracted in The Journal, Oct. 17, 1908, p. 1357, and published in *Annals of Ophthalmology*, January, 1909.

138. Abstracted in The Journal, Oct. 24, 1908, p. 1456.

140. Abstracted in The Journal, Oct. 10, 1908, p. 1270.

Medical Herald, St. Joseph, Mo.

January

143 Care of Perineum During and After Parturition. J. H. Talboy, Sioux City, Iowa
144 Some of the More Unusual Uses of Plaster of Paris in General and Orthopedic Surgery. H. W. Orr, Lincoln, Neb.
145 Immunity to Disease C. B. Hardin, Kansas City, Mo.
146 Treacherous Character of Appendicitis E. Lanphear, St. Louis
147 Treatment of Bronchopneumonia in Infants and Children L. C. Davis, South Milwaukee, Wis.

Archives Générales de Chirurgie, Paris

December, II, No. 12, pp. 554-664

49 *Early Typhoid Cholecystitis (Cholécystite typhique précoce.) L. Bobbio and Gennari.
50 *Esophagoscopy in Severe Cicatricial Stenosis of the Esophagus. (Du traitement par l'oesophagoscopie de nos derniers cas de rétrécissements cicatriciels à forme grave de l'oesophage.) Guisez.
51 *Transplantation of Ovaries. (Les greffes ovariennes avec ou sans anastomoses vasculaires.) Mauclaire.

49. **Early Typhoid Cholecystitis.**—Bobbio and Gennari relate a case of typhoid in a woman of 38, two months after her second childbirth. Five days after the first general symptoms pain developed in the right side and the gall bladder was seen to be much swollen. Five days later the pulse of 140 and temperature of 104 F. suggested acute cholecystitis with septicemia, and notwithstanding prompt operation the patient succumbed in a few days. The walls of the gall bladder were found studded with small miliary abscesses while the intestine had scarcely yet become involved in the typhoid process.

50. **Treatment of Stricture of the Esophagus Under Esophagoscopy.**—Guisez was able to cure by dilating or cutting in twenty-three out of 28 very serious cases of impassible stenosis of the esophagus. The esophagus was restored to normal size and shape and the patients are able to eat nearly or quite like other people. The results were better the more recent the development of the strictures. The short, valve-like strictures responded most readily; multiplicity of the strictures was no obstacle to final success, each one being treated in turn. The long strictures with longitudinal infiltration were the most difficult to cure and to keep cured as the stenosis displayed a great tendency to recur. He gives an illustrated description of the esophagoscope and cutting instruments used, with two views of one stricture before and after the three slits were cut in it.

51. **Engrafted Ovaries.**—Mauclaire goes over the history of transplantation of ovarian tissues, summarizing the 19 clinical cases in which autotransplantation gave remote positive results. He then summarizes 13 others in which the ovary was taken from another person. The last in the list is from his own practice. A woman of 29 with bilateral salpingitis for three years had long suffered from irregular, overfrequent and painful menses. He removed both tubes and ovaries, leaving the uterus, and implanted an ovary taken from a woman of 35, who had undergone an operation half an hour before for uterine fibroma and one ovary had been removed. The graft was not successful in this case, and the patient still suffers from the disturbances of the postoperative menopause. In another case he tried to re-establish the circulation through the implanted ovary by anastomosis of blood vessels, and he is convinced that success will lie in this direction. In conclusion he quotes with approval Franklin Martin's assertions in regard to the feasibility and promising future of engrafting the ovaries.

Bulletin de l'Académie de Médecine, Paris

January 5, LXXIII, No. 1, pp. 1-58

52 Improvement of Sclerosis in Patches Under Radiotherapy. (Deux cas de sclérose en plaques améliorés par la radiothérapie.) F. Raymond.

January 12, No. 2, pp. 59-92

53 Typhoid Epidemics at Toulon. L. E. Bertrand.
54 *Prophylaxis of Thrombosis and Embolism. (Coagulation et décoagulation du sang dans les veines.) Chantemesse.

54. **Prophylaxis of Thrombosis and Embolism.**—Chantemesse describes a method by which it is possible to see at a glance whether the coagulating power of the blood is above or below normal. A minute quantity of the blood is mixed with a solution of some salt that prevents coagulation, and with a series of capillary pipettes containing equal amounts of a 1/400, 1/600, 1/700, 1/800, 1/1000, 1/1200 and 1/1500 solution of potassium oxalate, only two or three drops of blood are required to make an accurate test of the condition of the blood in regard to the coagulability at any time. This reveals impending hemorrhage or impending thrombosis, as the blood is seen to be less or more coagulable than normal. In case of the former, administration of a calcium salt will restore the coagulating power to normal, while if the blood coagulates too readily this can be remedied by administration of citric acid—the effects of each watched by repeating the test. He is confident that by this simple means it is within our power to ward off thrombosis and embolism after operations for uterine fibroma, etc., or childbirth, and to ward off hemorrhage in typhoid. He has noticed that whenever there has been much loss of blood from repeated external hemorrhage or internal hemolysis, the organism strives to defend itself against further loss of the kind by increasing the intravenous coagulability of the blood. In typhoid, for instance, and in uterine hemorrhage the coagulating power of the blood increases to a marked degree, and if the circulation becomes sluggish, either spontaneously or in consequence of some ligature, a thrombus gradually forms, then phlebitis, and sometimes—especially after operations for uterine fibroma—the catastrophe of embolism follows. He gave calcium salts to a patient with hemorrhagic typhoid until he overshot the mark and phlebitis resulted; then giving citric acid to render the blood more fluid, the phlebitis rapidly retrogressed, but he carried this to excess also and the hemorrhages returned. By the pipette potassium oxalate test it is possible to oversee the condition exactly and turn the scale at will.

Grece Médicale, Syra, Greece

December 15, X, No. 24, pp. 45-48

55 Radical Treatment of Inguinal Hernia. E. Kallionzis. Commenced in No. 22.

Obstétrique, Paris

I, N. S., No. 6, pp. 561-628

56 Research on the Blood and Urine of New-Born Infants. (Recherches sur le sang et sur l'urine des nouveau-nés pour servir à l'étude de l'ictère simple des nouveau-nés.) V. Cathala and R. Daunay.

Presse Médicale, Paris

January 9, XVII, No. 3, pp. 17-24

57 *Typhoid Bacilli Carriers. (Porteurs de germes et fièvre typhoide.) R. Debré.
58 *Influence of External Temperature on the Glycosuria of Diabetics. H. Busquet.

January 13, No. 4, pp. 25-32

59 *False Sclerosis of Nervous Tissue. (Fausses scléroses du tissu nerveux.) G. Durante.
60 Dysenteric Amœbæ and Suppuration in the Liver. (Amibes dysentériques et suppuration du foie.) E. Marchoux.
61 Mydriatic Action of Serum and Urine in Nephritis and in Nephrectomized Animals. G. Macaroff.

57. **Typhoid Bacilli Carriers.**—Debré quotes statistics which show that in a recent analysis of 451 cases of typhoid in women in Germany, 80 per cent. were domestics more or less connected with the cooking of the meals. Rondet has recently observed a family epidemic in which typhoid developed in a series of cases as the persons ate food prepared by the members of the family caring for the sick and those who had recovered from the disease months before. This explains the family epidemics among the poor, as the persons taking care of the sick are also those who prepare the food. In wealthy families the cooks are responsible for the epidemics if they happen to be bacilli carriers—the persons taking care of the sick not participating in the preparation of the food. Job and Grysez have recently reported a typhoid epidemic which was traced to a creamery and persisted after strict disinfection. One of the employés was finally found to have had typhoid six months before and still to be harboring the bacilli. As soon as she was transferred elsewhere the epidemic ceased. He adds that the drastic measures adopted in Soper's case, reported in The Journal, June 15, 1907, page 2019, can seldom be applied, but that chronic typhoid bacilli carriers should at least be excluded from all occupations that have anything to do with food.

58. **Influence of External Temperature on the Glycosuria of Diabetics.**—Busquet's tests of three diabetic patients showed conclusively that the proportion of sugar in the urine constantly decreased when the patients were kept specially warm and increased in the cold. The tests were made with rooms heated to 11 and 12 C. (51 and 53 F.) or at a temperature of 20 C. (68 F.). He theorizes to explain this favorable action of warmth on diabetics, and draws the practical conclusion that diabetics should avoid cold and chilling and should seek to live in a warm even temperature. His clinical experience

confirms in every respect the findings of Lüthje with dogs after removal of the pancreas and glycosuric patients at a temperature of 30 C. (86 F.). Busquet did not apply such extremes of temperature.

59. **False Sclerosis of Nerve Tissue.**—Durante discusses the changes sometimes observed in nerve tissue and shows that some of them are more apparent than real. The nervous elements are modified but some of the fibers still retain their essential characteristics and are thus capable of restoration of function. This explains, he remarks, the clinical polymorphism so frequently observed, the clinical manifestations varying so widely with apparently identical lesions. His research demonstrates further the importance of training and functional re-education of nerves involved in these pseudofibrosarcomas and false scleroses involving the nervous system, instead of regarding them as beyond relief and neglecting further treatment.

Berliner klinische Wochenschrift

January 11, XLVI, No. 2, pp. 45-92

62 Pathology of Atrioventricular System and Heart Weakness. J. G. Mönckeberg.
63 *Case of Atrophy of the Pancreas. W. Keuthe.
64 *Progressive Polyarthritis in Patient with Psoriasis for Nearly Thirteen Years. (Arthropathia psoriatica.) G. A. Wollenberg.
65 *Remote Results of Cerebrospinal Meningitis. (Folgen der Erkrankung an Cerebrospinalmeningitis.) L. Cohn.
66 Antitryptic Action of Blood Serum. (Antitryptische Wirkung des Blutserums.) V. Fürst.
67 Primary Glaucoma. Helbron.

January 18, No. 3, pp. 93-140

68 *Origin, Prevention and Treatment of Tuberculous Glandular Processes in Neck. (Halsdrüsentuberkulose.) A. Most.
69 Autoserotherapy in Serofibrinous Pleurisy. Schnütgen.
70 Correlation Between Sexual Characteristics and Suprarenals. (Geschlechtscharaktere und Nebenniere in Correlation.) L. Thumim.
71 Importance of Tuberculin in Campaign Against Tuberculosis. S. Elkan.
72 Therapeutic Use of Emanations. A. Bulling.
73 **Sterilizing Properties of Osmotic Currents.* (Ueber sterilisatorische Eigenschaften osmotischer Strömungen.) F. Holzinger.
74 Glucosimeter. (Eine neue einfache, quantitative Zuckerbestimmung mit dem Glukosimeter.) I. Zeehandelaar Jbz.

63. **Case of Atrophy of the Pancreas.**—Keuthe reports the details of a case of atrophy of the pancreas with two concrements, in a man of 56, the diagnosis being made during life with almost certainty. The atrophy was so extreme that no outlet to the organ was to be found. None of the six different functional tests applied gave positive information, but the findings combined rendered the diagnosis more than probable. The patient was under observation for six years during the exacerbations of the trouble while he returned to work during the intervals of comparative health. The first symptom was a sudden and violent diarrhea. He had had two attacks of typhoid fever and malaria for one year, about twenty years before the pancreatic symptoms. Some of the metabolic findings in this case have been previously published, and the autopsy findings are here illustrated.

64. **Joint Affection Accompanying Psoriasis.**—Wollenberg gives the skiagrams taken at an early stage of the progressive involvement of the joints in a young woman who had had psoriasis for thirteen years. Great benefit was derived from a six weeks course of mud baths, during which the joint disturbances and psoriasis almost completely vanished. New joints soon became affected, however. The prognosis is unfavorable, notwithstanding the great improvement to date. In the 100 cases on record of the kind very few cures have been recorded. The exacerbations generally parallel those of the skin affection. The lack of heart complications differentiates these cases from secondary chronic articular rheumatism. The skiagrams are particularly interesting because they show the condition within 6, 8 or 14 days of the first symptoms in the joints.

65. **Sequelæ of Epidemic Cerebrospinal Meningitis.**—Cohn reports his experiences with 82 cases of cerebrospinal meningitis; 50 of the patients died and 2 died within two years of an intercurrent affection; 27 of the others were recently examined. Complete recovery was the rule in all the mild cases. He found that after a month of apparent convalescence it is still possible for hydrocephalus to develop. All the signs of paralysis may retrogress, as also choked disc, but if deafness develops it seems to be irreparable. The serum agglutinated meningococci even after two years in two cases. In another case there was atrophy of the testicles.

68. **Prevention of Tuberculous Glandular Processes in the Neck.**—Most explains tuberculosis of the glands in the neck as due to an infection at the sources whence these glands derive most of their lymph. His research has shown that the danger points for invading infection are the tonsils and where the mucosa of the mouth, nose and eyes joins the skin; all other sources of infection are of subordinate importance. In 60 children with these tuberculous glands, in the majority the trouble was evidently dependent on infection from the tonsils, and in the others from the mucosæ opening on the face. Prophylaxis should therefore aim to keep these points in physiologic condition and to train the child to avoid contact with sources of infection. The glandular process once developed, the operation must be thoroughly radical, removing all the groups of glands that could be possibly involved. He uses Kocher's collar incision which is concealed by the collar later; the operation should be followed by thorough general treatment. The article is illustrated.

73. ***Sterilizing Properties of Osmotic Currents.***—Holzinger describes experiments which show that bacteria are unable to proliferate in a culture medium in vessels subjected to osmotic currents. The osmotic currents are able to sterilize a culture medium containing bacteria but no albumin, the sterilization being complete in 48 hours and continuing as long as the osmosis proceeds with sufficient energy.

Correspondenz-Blatt für Schweizer Aerzte, Basle

January, XXXIX, No. 2, pp. 33-72

75 Results of Recent Research on Etiology and Diagnosis of Syphilis, Especially Serodiagnosis. W. Kolle.
76 **Stasis Cyanosis After Compression of Trunk.* (Stauungsblutungen nach Compression des Rumpfes.) E. Ruppanner.

76. **Stasis Cyanosis After Compression of the Trunk.**—Ruppanner reports four cases from Wilms' clinic at Basle. Two of the patients were women injured during a theater panic and both, besides the stasis cyanosis, were unconscious for nearly twenty-four hours and neither had any remembrance of how they were injured. The swollen aspect and the cyanosis rapidly retrogress as a rule, and by the end of three or four weeks there is no trace of the injury except possibly the still bloodshot eyes. The prognosis is good in every respect except in regard to vision. Consecutive atrophy of the optic nerve has been reported in two cases and in Neck's case the hemorrhage in the macula became transformed into opaque patches. The parts of the skin showing the cyanotic patches are never tender, demonstrating that they are not the result of direct trauma. One surgeon supposed the cyanotic patient was asphyxiated and made ready for tracheotomy until the patient's tranquil breathing showed his mistake. The sharp limitation of the hemorrhagic infiltration and cyanosis below a circular line around the neck may erroneously suggest strangling. In some cases the symptoms may simulate fracture of the base of the skull, especially the suffusion in the conjunctivæ, and the discoloration of the lids, with the hemorrhages from nose, mouth and ears. He is inclined to explain the syndrome produced by compression of the trunk as the result of intense venous hyperemia with reflex closure of the glottis and tension of the abdominal walls, the latter increasing still more the pressure inside the abdomen and chest.

Deutsche medizinische Wochenschrift, Berlin

January 14, XXXV, No. 2, pp. 49-88

77 *Diagnosis and Treatment of Inoperable Gastric Carcinoma. (Diagnose und Behandlung des nicht operablen Magencarcinoms.) L. Kuttner.
78 *Removal of Middle Segment of Stomach on Account of Ulcer. (Entfernung des mittleren Abschnittes vom Magen wegen Geschwür.) Riedel. Commenced in No. 1.
79 *Indications for Spinal Anesthesia, Especially with Abdominal Operations. (Indikationsstellung zur Lumbalanästhesie.) E. Holländer.
80 *Progress in Treatment of Flatfoot Disturbances. (Behandlung der Insufficientia pedis.) A. Schanz.
81 Treatment of Skin Affections with the Quartz Lamp. (Behandlung von Hautkrankheiten mit der Kromayerschen Quarzlampe.) F. Bering.

82 Explanation of Early Reaction After Roentgen-Ray Treatment. (Zur Aetiologie der Frühreaktion nach Röntgenbestrahlung.) H. E. Schmidt.
83 Medication by Inhalation. (Zur Inhalationstherapie.) M. Lubinski.
84 *Treatment of Pertussis. (Zur Therapie des Keuchhustens.) Senftleben.
85 Historical Development of Pharmacotherapy. H. Schulz. Commenced in No. 1.

77. **Diagnosis and Treatment of Gastric Cancer.**—Kuttner calls attention to the onset of the stomach affection as instructive regarding its malignant or non-malignant nature. In all his experience he has known of only three cases in which profuse hematemesis was the initial symptom; in the others there was always a history of acute dyspepsia or chronic gastric catarrh rebellious to ordinary measures. At the same time, he remarks, there is very little danger that a non-malignant chronic gastric catarrh or achylia will become transformed later into a malignant neoplasm. He has encountered only four cases in which years of achylia had preceded the development of cancer. On the other hand, it is a comparatively frequent experience to encounter cancer in patients with a history of gastric ulcer immediately preceding, or with even a long interval of apparent health. Loss of appetite is an instructive symptom of cancer, especially when there is pronounced repugnance to meat. The age is less important for the diagnosis than hitherto assumed; the wider his experience, the larger the number of youthful patients discovered to have cancer—their youth preventing the correct diagnosis in many cases. A family tendency is also an aid to the diagnosis, as also the displacement of the tumor when the stomach is inflated with air, the peristaltic and antiperistaltic movements in the stomach and occult blood in stomach content or stool. The lack of hydrochloric acid and the presence of lactic acid are not specific for cancer but if with lack of hydrochloric acid and good motor functioning no occult blood can be detected in stomach content or stool on repeated examination this is presumptive evidence against the probability of cancer in dubious cases. Left pleuritis of otherwise unexplained origin should suggest the possibility of carcinoma of the lesser curvature. Small scraps of ice or ice-cold water or champagne are useful in case of vomiting, or from 2 to 5 drops of chloroform on ice, or morphin. If the vomiting persists, great relief may be obtained by rinsing out the stomach, possibly using some disinfectant in the water if there is much fermentation. Saline purgatives should be strictly avoided, and rhubarb or cascara used when enemas fail. In diarrhea, lavage of the stomach generally gives relief or bismuth, opium, etc., may be found necessary.

78. **Removal of Middle Segment of Stomach for Ulcer.**—Riedel states that he has performed this operation on 23 patients, with 26 per cent. mortality. On the other hand, none of his patients died in the series of cases in which the operation was restricted to restoring the communication between the cardia and pylorus or to gastroenterostomy. At the same time he regards this resection of the middle segment of the stomach as the operation of the future. All other technics give uncertain results while this restores comparatively normal conditions. The stomach is a little shortened but otherwise it retains its normal shape and it functionates normally. Surgeons have hitherto been more interested in ulcers in the pyloric region as these entail stenosis, but he declares that the callous ulcers which develop in the middle section of the stomach deserve attention fully as much. In his experience they are almost as frequent as the pyloric ulcers—2 to 3—and although the callous ulcer is apparently small yet it destroys the stomach wall very extensively, thus seriously altering its shape. As the ulcer in the middle segment is to the left of the median line, pain from an ulcer in this section is felt under the left costal arch or at the back on the left. As hematemesis does not occur in more than half the cases, this pain and increasing loss of weight are the only signs of the trouble until a tumor becomes palpable. Internal treatment must be exhausted, of course, before surgical measures are contemplated, especially as an ulcer in the mucosa will heal under these measures, but they have no effect on the callous ulcer. Mere excision or gastroenterostomy gives unsatisfactory results as such an extent of stomach wall has been injured by the encroaching ulcer that even approximately normal conditions can not be restored. The proper treatment is to cut out completely the segment involved and suture the parallel edges of the stumps together. His experience shows that this is a comparatively simple and harmless operation, but that it should not be attempted on patients suffering from concomitant heart or lung affections.

79. **Spinal Anesthesia and Its Indications.**—Holländer protests against the way in which surgeons seem to be turning aside from spinal anesthesia. It never fails for operations on the legs, but he prefers local anesthesia for these, except for elderly, decrepit patients. For affections of the abdomen and trunk, especially those with suppuration, requiring tedious operations, the patients generally being much debilitated, spinal anesthesia offers peculiar advantages, not the least among them being the lesser liability to postoperative atony of the bowel. It has been his experience that patients who have had operations done under various technics prefer the spinal method, not minding the retention of consciousness. It sometimes proves a direct aid during the work as the patient can be asked to strain, cough, etc. On the other hand, the surgeon would be much hampered by it in case of an unexpected hemorrhage or other mishap. The fact that there need be no fear of transient postoperative paralysis of the intestines frequently turns the scale in favor of the spinal technic. The addition of adrenalin to the fluid injected causes increased tonicity in the intestines; they look as if they had been lying for a time in formalin. The tonus may even become excessive and peristalsis so vigorous that the intestine may simulate a tumor. This stiffness and prominence of the intestines is a great help in operating and it promotes uneventful healing. In 19 cases of appendicitis in which the operation was done under spinal anesthesia, the condition afterward compared most favorably with that of patients operated on by the usual inhalation technic. He has performed forty-one other abdominal operations with the spinal technic and prompt recovery, including operations on the stomach, pancreas, kidney, gall bladder and intestines besides operations on the uterus and ovaries. In another case a much debilitated woman with a carcinoma in the rectum involving also vagina and uterus was operated on as the large neoplasm was movable. It was removed by the abdominal route under spinal anesthesia, the operation lasting two and a half hours. The woman seemed better after than before the operation; there was no collapse, but she succumbed later to sepsis from gangrene of the sigmoid flexure which had been sutured to the anus.

80. **Treatment of Flatfoot.**—Schanz calls attention to the fact, which has been generally overlooked hitherto, that the arch of the foot is a transverse as well as a longitudinal arch. The transverse mechanism may be out of gear without disturbance of the longitudinal or both may be involved. This is the explanation of the persistence of symptoms after correction of flatfoot: the transverse arch has not been corrected with the longitudinal. The disturbances in the transverse arch are experienced in the front part of the foot and it spreads out abnormally wide; between the ball of the big toe and the ball of the little toe the distance is over a quarter of an inch wider than in the other foot. By strapping the foot with adhesive plaster to bend it into proper shape to restore the transverse arch, all disturbances vanish. He prefers for the purpose a strip of cotton flannel and Finck's glue. This makes a plaster that fits better and is more easily removed. The glue is made of 7 parts Venice turpentine; 6 parts mastic; 12 parts colophony; 4 parts white resin, and 90 parts 90 per cent. alcohol, mixed and filtered. A thin layer of this mucilage is spread over the foot, and the fuzzy side of the cotton flannel adheres firmly to it. He regards this combination of glue and cotton flannel as a marked advance in the technic of such dressings. He also gives an illustrated description of a durable leather device to wear to sustain both the longitudinal and the transverse arch.

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Original Articles

FREQUENCY OF TUBERCULOSIS IN CHILDHOOD *

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If we vaccinate a man for the first time, we see, at the point of inoculation, no specific changes during the first days, but the vaccinal effect is produced only on the third to the fourth day and reaches its maximum on the eighth to the tenth day. When, however, we repeat the vaccination after several months, we find that there appears, within twenty-four hours, a small local inflammation which afterward disappears rapidly. From this early reaction we can diagnose a previous inoculation if we are not informed of the history.

After careful study of these small skin eruptions in cowpox inoculation, I tried the same method in tuberculosis and found that only individuals who had been infected previously with tuberculosis showed within twenty-four hours a local inflammation after the inoculation with Koch's old tuberculin.

It appeared that this skin reaction was, in principle, identical with Koch's febrile reaction after injection of tuberculin and that it corresponds especially to the *Stichreaktion* of the subcutaneous tissue, which has been first described by Epstein and Escherich and later studied more closely by von Schick, Klingmüller and F. Hamburger.

After my publication on the cutaneous reaction as a test for the presence of tuberculosis, Wolff-Eisner and Calmette found similar local changes after the instillation of dilutions of tuberculin into the conjunctiva, and Moro and Lignières found them after the application of tuberculin by friction of the intact skin.

My cutaneous method has the advantage over the injection of tuberculin that it does not produce any general symptoms. It has the advantage over the cutaneous reaction of producing entirely harmless inflammatory efflorescences on the skin and over the percutaneous application of tuberculin that it can be carried out more quickly and more uniformly. It is, however, not as sensitive as the *Stichreaktion* and does not produce inflammatory phenomena of the tuberculous foci, which, after Koch's injection, can be utilized diagnostically.

My method of applying the test is as follows: The skin of the forearm is scrubbed with ether; then two drops of undiluted old tuberculin are dropped about four inches distant from each other. Then, with a vaccinating lancet, the point of which has the form of a small chisel, a superficial circular scarification is made between the two drops (for the control of the traumatic redness following the small scarification). Finally, the same scarification is made inside of the two drops; a few fibers of cotton are put on the drops so that they will not flow. After five minutes the cotton is taken off. No dressing is applied. The papula is examined after twenty-four and forty-eight hours. It is considered as positive when the tuberculin scarifications are clearly different from the control places, but the inflammatory reactive area must measure at least 1/6 of an inch (5 mm.).

RESULTS OF THE TEST

During the last year and a half I have made a cutaneous test on all the children who were admitted to the children's clinic of Professor Escherich in Vienna. Nearly half of these children were repeatedly examined and in many instances the results were controlled by subcutaneous injections of tuberculin made by Dr. Hamburger. Two hundred subjects were examined postmortem.

The results of these studies are shown in the two accompanying charts. Chart 1 includes all cases with the exception of those suffering from measles. The latter cases were omitted because during measles the cutaneous tuberculin test is always negative, as I have already pointed out in a former communication. This chart shows, therefore, the results of the tests in 1,407 cases. They are arranged according to age. For each year, from birth to the age of 14, one vertical division is made, and in each division is noted the percentage of reacting and non-reacting cases. The reacting cases are marked by shading. It is evident that in the first year the shading includes only 5 per cent. of the cases, rapidly increasing in the following years, and reaches a percentage of 80 in the tenth year. This high percentage can not be considered as being the figure for all children, as very many cases are admitted into the hospitals because of tuberculosis. In order to make the matter clear, I have marked in black those cases in which tuberculosis was manifest. You see that the black rises in the first year nearly as high as the shading. This shows that, in the first year of life, nearly all reacting patients present clinical symptoms of the disease. In the succeeding years we see that the shading denoting positive reactions far exceeds the black. This proves that not all infected patients present clinical symptoms; in other words, that latent tuberculosis becomes more frequent in succeeding years.

This increase of latent tuberculosis is more clearly shown in the second chart. All manifestly tuberculous cases are omitted. This includes all of those which are marked black on Chart 1, and, besides, all cases which were, in any way, suspected of tuberculosis; that is, all children with bronchitis or anemia. The children who

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* Paper read by invitation before the Chicago Medical Society, Oct. 14, 1908.

† As noted in the department of Medical News in THE JOURNAL, Feb 20, 1909, page 642, Dr. von Pirquet is moving to Baltimore.

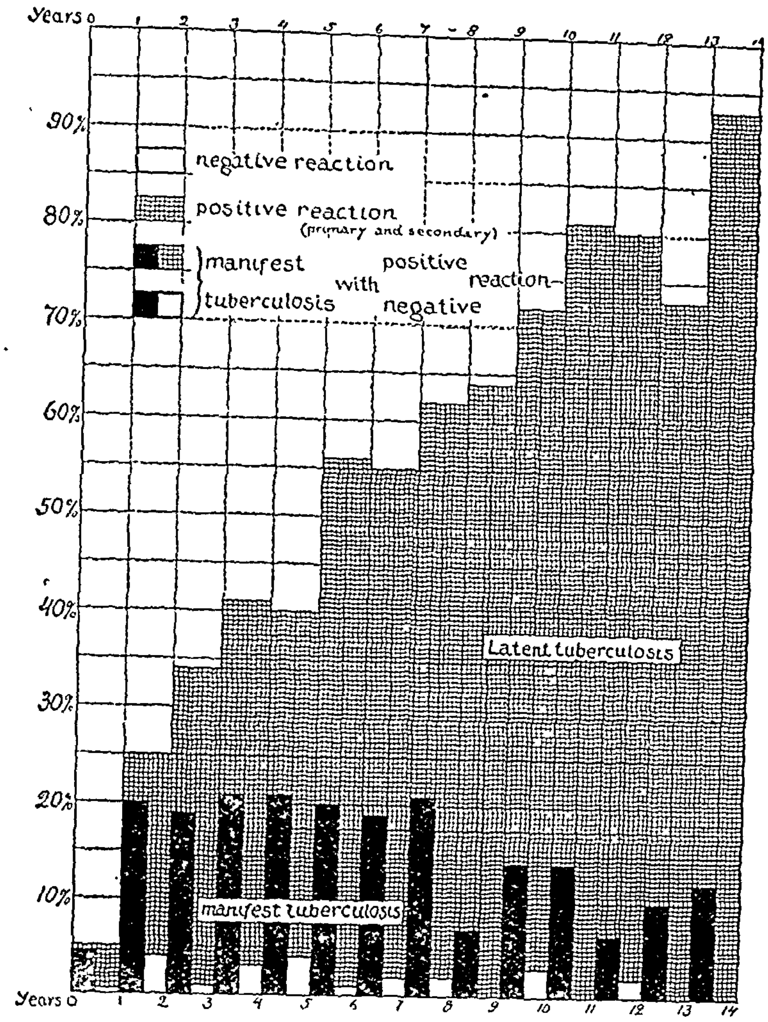

Chart 1.—Cutaneous tuberculin reaction in 1,407 children. Escherich Clinic, Vienna.

In this table the positive reactions are grouped as primary and secondary. In cases presenting clinical evidence of tuberculosis the reaction is positive in almost all cases after twenty-four hours, whereas in latent tuberculosis, especially in older children, we see that about half of the patients do react only after some days (this I have termed a "torpid reaction"), and some react only to a second test ("secondary reaction"). These two forms of reaction are indicated in the chart, and include also cases in which the cutaneous test was negative, but hypodermic injection of tuberculin proved positive. These three kinds of reaction have this in common: that a slight reactivity against tuberculin exists which is too weak to be evidenced immediately, but which is aroused after the first application.

SIGNIFICANCE OF THE REACTION

What does this form of reaction mean? One can say with some certainty that it generally means a slight and old tuberculous infection which is in the process of healing. Up to the present time I have not had a sufficient number of postmortem examinations to prove this point absolutely. But the following reasons speak for the validity of this view: first, at autopsies secondary or torpid reactions were found to have been produced by slight and old tubercles; second, fresh and clinically manifest tuberculosis does not show this form of reaction; third, the increase of these secondary reactions from year to year corresponds in its percentage to that established by Dr. Hamburger for the frequency of healed tubercles found at autopsy in children who died from other causes, and, fourth, we have a similar delay in the development of the local phenomena in revaccination with cowpox in cases in which a long time has elapsed after the previous vaccination.

I conceive that the reactivity against tuberculin appears some weeks after the infection has occurred and then increases in degree after some months to a considerable height. If the tuberculosis is overcome by the individual and is healed, the reactivity slowly decreases in the following years below the level of cutaneous activity. We know from the studies of various antibodies that, in an organism which has once formed antibodies and has lost them, a slight reinfection or a second injection with the same poison quickly stimulates a new and strong formation of antibodies. In a similar fashion, if a person with a latent or healed tuberculosis is again infected with tubercle bacilli or if he absorbs even a minimal amount of tuberculous poi-

TABLE OF CHART 1.—CUTANEOUS TUBERCULIN REACTION IN 1,407 CHILDREN. ESCHERICH CLINIC, VIENNA

PART I

Years	0—1	1—2	2—3	3—4	4—5	5—6	6—7
No. of all cases	410	116	98	110	87	91	86
Reaction, positive	21 (5 %)	24 (4 %)	32 (33 %)	42 (38 %)	31 (36 %)	50 (55 %)	46 (53 %)
Manifestly tuberc. reacting	21	23	19	23	19	18	17
Manifestly tuberc. not reacting (millary tuberc.)	1 (5 %)	4 (20 %)	1 (19 %)	3 (21 %)	4 (21 %)	1 (20 %)	2 (19 %)

PART II

Years	7—8	8—9	9—10	10—11	11—12	12—13	13—14
No. of all cases	59	94	63	57	55	49	32
Reaction, positive	35 (60 %)	60 (64 %)	43 (69 %)	46 (81 %)	43 (78 %)	36 (73 %)	30 (93 %)
Manifestly tuberc. reacting	12	7	9	8	3	6	4
Manifestly tuberc. not reacting (millary tuberc.)	1 (21 %)	.. (7 %)	2 (14 %)	.. (14 %)	1 (6 %)	.. (10 %)	.. (12 %)

are dealt with in Chart 2 are chiefly those which came to the hospital for some acute infection and the healthy babies belonging to our so-called *Säuglingsschutzstelle* (the dispensary inaugurated by Professor Escherich to which healthy children are brought for observation and in which the mothers are taught how to care for them).

Chart 2 refers to the average occurrence of latent tuberculosis in the healthy children of Vienna. It is seen that, in the first two years, no shading appears. This shows that during that time an infection with tuberculosis practically does not occur without the existence of some clinical phenomena, such as bronchitis or anemia. On the other hand, the increase in the number of reacting children in the following years is nearly as high as in Chart 1 and reaches 70 per cent. in the tenth year.

son (by means, for instance, of a cutaneous tuberculin test) he again forms antibodies and shows, some days or a week later, a high reactivity. A high reactivity does not prove the existence of an active tuberculous process in the sense that the tuberculosis is progressive. It only proves that the organism has recently come in contact with tubercle bacilli or their poisons.

Therefore, from a consideration of Chart 2, we can conclude that in older children the presence of a tuberculin reactivity may be compatible with apparently perfect health. This coincides with the facts established by Naegeli, F. Hamburger and others, based on autopsies made in children of various ages.

The percentage of infected (reacting) children is a particularly high one in my table. In other cities it will hardly be as high because tuberculosis is notoriously prevalent in Vienna. Furthermore, all my patients belonged to the poorer classes. My statistics, therefore, lose in some degree their general value. Our children are infected at a much earlier age on account of the prevalence of tuberculosis among their parents. It is necessary to make similar studies in every city in order to ascertain the frequency of tuberculosis in general.

METHOD AND AIMS OF INTERNATIONAL STATISTICAL STUDY

I, therefore, wish to suggest a definite method for international use. The method is as follows:

All children are submitted to the cutaneous test. The following day they are inspected. Those showing a positive reaction are noted as belonging in the group of early reactions. A week later those who showed no reaction are again tested and inspected a day later. If they then react, they are grouped in the class of secondary reactions. Those who have not reacted on either occasion can be considered as belonging to the non-reacting class. This method of testing requires about one hour for a hundred children and only half an hour is consumed in the inspecting process. Medical school officers could easily accomplish this at the opening of the schools in autumn. One forenoon would be sufficient for a school of from 400 to 600 children. As the test is absolutely harmless, there can be no objection to carrying out such valuable investigations.

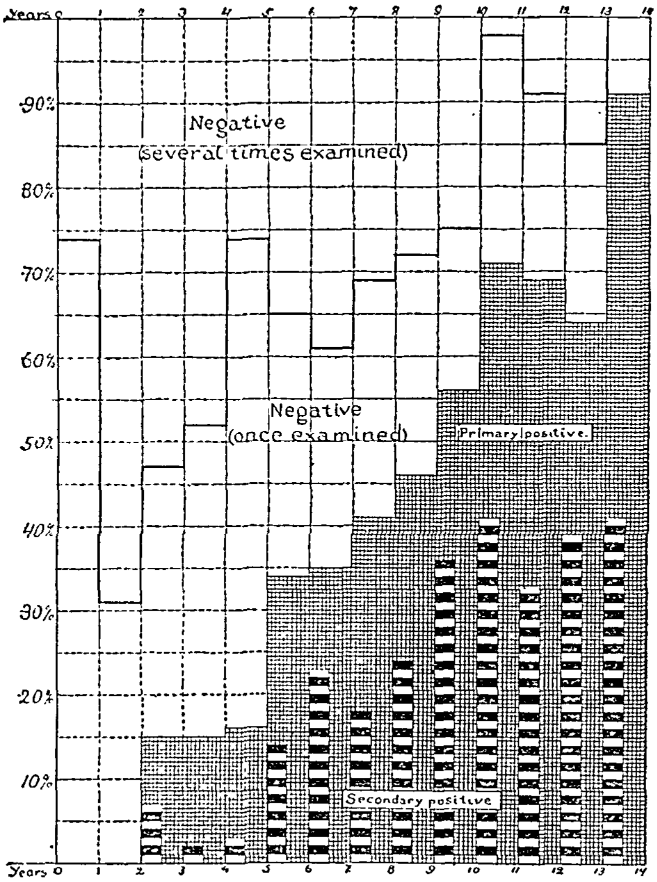

Chart 2.—Cutaneous tuberculin reaction in 1,134 children, clinically non-tuberculous. Escherich Clinic, Vienna.

TABLE OF CHART 2.—CUTANEOUS TUBERCULIN REACTION IN 1,134 CHILDREN CLINICALLY NON-TUBERCULOUS, ESCHERICH CLINIC, VIENNA.

PART I

Years	0—1	1—2	2—3	3—4	4—5	5—6	6—7
All cases minus all surely tuberc. and all suspect (pallor, bronchitis)	410—(21+1) =388	116—(23+ 4) =89	98—(19+4) =75	110—(23+10) =87	87—(19+6) =62	91—(18+7) =66	86—(17+8) =61
Frequently examined negative, also on autopsy tb.-free	84 (26 %)	61 (69 %)	40 (55 %)	37 (48 %)	16 (26 %)	23 (35 %)	24 (39 %)
Primary positive (both clinically unsuspected)	....	....	5 (7 %)	10 (12 %)	8 (13 %)	13 (20 %)	7 (12 %)
Torpid or secondary reaction	....	....	5 (7 %)	2 (2 %)	2 (3 %)	9 (14 %)	14 (23 %)

PART II

Years	7—8	8—9	9—10	10—11	11—12	12—13	11—14
All cases minus all surely tuberc. and all suspect (pallor, bronchitis)	59—(12+8) =39	94—(7+15) =72	63—(9+9) =45	57—(8+ 5) =44	55—(3+7) =45	49—(6+7) =36	32—(4+6) =22
Frequently examined negative, also on autopsy tb.-free	12 (31 %)	20 (28 %)	11 (24 %)	1 (2 %)	4 (9 %)	5 (14 %)	....
Primary positive (both clinically unsuspected)	9 (23 %)	16 (22 %)	9 (20 %)	13 (30 %)	16 (36 %)	9 (25 %)	11 (50 %)
Torpid or secondary reaction	7 (18 %)	17 (24 %)	16 (36 %)	18 (41 %)	15 (33 %)	14 (39 %)	9 (41 %)

The classification given above is not a perfect one, inasmuch as the class of non-reacting children will contain some individuals who, at a further repetition of the test, would react and, therefore, would have to be transferred from the third to the second class. Three or more trials for three or more consecutive weeks can be easily performed in hospitals. One can also employ the more rapid method of Dr. Hamburger, which consists in injecting one milligram of tuberculin subcutaneously into the non-reacting children and examining them on the following day for a local subcutaneous reaction (so-called *Stichreaktion*). This method is, on the whole, quicker and more exact, but is not as feasible for use on a large scale as, for example, in schools.

For practical and especially for statistical purposes the repeated cutaneous test may be considered sufficient.

The next idea in reference to my proposal of an international statistical study is to ascertain at what age children generally acquire the tuberculous affection. We should then be able to say at what age they are most susceptible. I hope that, by repeated annual tests and the determination at the same time of the clinical symptoms which arise between the last negative and the first positive reaction, we may be able to establish the onset of the disease. In this way we shall be in a position to institute the proper hygienic measures for the prevention of tuberculous infection in childhood, especially at the period of greatest danger.

THE DISEASES OF THE CEREBRAL ARTERIES

THEIR EFFECTS AND TREATMENT, WITH SPECIAL REFERENCE TO ARTERIOSCLEROSIS *

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To consider the manifestations of the conditions of the blood vessels of the brain, with reference to indications or suggestions for measures to prevent or at least postpone an attack of hemiplegia, is the purpose of this contribution.

Small or common things are sometimes overlooked in the eager pursuit of the large or more obscure ones, and this often results in the passing of a common disease while searching for the uncommon. The final perception of the aggregation of symptoms which, taken singly, are of trivial significance, not infrequently reminds us of our earlier sins of omission.

The fundamental cause of hemorrhage and thrombus seems to be undoubtedly an alteration in the vessel wall, a thickening of one or more of the coats of the arteries, or arteriosclerosis.

It has been stated long ago, in a way that has become proverbial, that there is no better indication of the age of an individual than the condition of his blood vessels. In the main this is true, but how much more certain is the indication when we are able to apply this statement to the cerebral vessels, as compared with vessels elsewhere!

Many opinions and arguments have been brought forward regarding the influences which have a bearing on the cause of arterial changes. A very important group is that referred to as toxic, and the most important in this group is syphilis. This influence is so thoroughly recognized that arterial occlusion occurring before the age of 40 is regarded with suspicion even in the presence of the most emphatic negative history.

When the vascular system is attacked by *syphilis, two* conditions may be considered, the untreated and the partly or insufficiently treated disease. In the former the vessel is suddenly attacked, and this as a rule with the evidences of endarteritis elsewhere. These conditions may come on during the secondary eruption. It is far more frequent to observe a patient in the thirties, who shows a transitory weakness of an arm, more or less sudden in onset, with numbness and tingling of the same side, or a unilateral oculomotor paralysis, who admits having had one or more of the manifestations of syphilis ten to twenty years before, and who has been to Hot Springs for four to eight weeks, had been rubbed with mercury and had taken "potash," after which he was pronounced cured. These are the partly or incompletely treated patients.

It seems inadvisable to enter into the various opinions as to whether high blood pressure is the cause of arteriosclerosis or *vice versa;* suffice it to say that they usually exist together. There are, however, two points bearing on the etiology which are deserving of mention:

1. With the thickening of the vessel wall the elasticity must be impaired, and, while normally the range between the systolic and the diastolic pressure is considerable, this lessening of elasticity would seem to shorten the range, with the result that the average pressure is increased through which a more continuous strain is exerted on the vessel wall.

2. It is also to be borne in mind that sclerotic arteries, or a predisposition toward them, are as much of an individual peculiarity, possibly through inheritance, as a big hand, a tough skin, or a large head.

PATHOLOGY

There are two forms of arteriosclerosis recognized, the diffuse and the nodular.

In most arteries, according to the observations of von Bergmann, the selective tendency of these varieties is opposed; the cerebral vessels, however, are about equally affected by both forms; these arteries were found to be affected by the diffuse form in 40 per cent. and in the nodular form in 43 per cent. Both forms, however, may coexist in the same vessel. This important observation seems to explain the apparent predilection on the part of the cerebral arteries. It also furnishes an explanation for the finding of the heavy beaded or nodular and the tortuous pipe-stem conditions to be felt in the radials in individuals who show no evidence of affection of the cerebral vessels. *It may be said that the condition of the general arterial system* is not always an index and, therefore, should not alone exclude the possibility of the existence of cerebral arterial sclerosis.

The two varieties of arterial thickening offer possibilities which are better considered separately. First, the nodular form, by reason of the irregularity of its distribution and the intervening portions of vessels with little change, suggests the likelihood of aneurism. These aneurisms occur either as multiple miliary aneurisms, affecting the smaller vessels, varying from 1/100 to 1/25 of an inch (Gowers), of which as many as a hundred have been found in a single brain, or they may affect the larger brain vessels. They are more frequent on the left side, vary from the size of a pea to that of an egg, and are genuine aneurisms involving all coats (*Edwards*). *One point regarding aneurisms* worthy of attention is that they may be more or less transitory; a sudden dilatation of a vessel supplied with abundant elastic tissue is quite possible, and it requires no great imagination to conceive the possibility of the sudden return to normal on the lessening of the tension. *Again* under this circumstance it may be very *difficult to* demonstrate such dilatations postmortem, however certain we may be of their occurrence during life. Rupture of either variety is a common result with the consequent hemorrhage.

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* Read at the first annual meeting of Boulder County Society, Longmont, Colo., April 2, 1908.

The foregoing condition of the vessel wall is nearly always associated with plaquing, roughening of the intima and deposit of fibrin, and these conditions, associated with local slowing of the blood stream and weakening of the heart, favor the formation of the thrombi. It is important to bear in mind, however, that slowing of the blood current does not necessarily mean lowered blood pressure. It is the slowing of the current with the high tension combined that is most favorable to thrombus formation.

In the diffuse form, when uniform, the changes are for the most part nutritional, but may, as the thickening increases, affect one side more than another. Thrombus may occur, but partial or incomplete occlusion is more frequent and either end is softening which is proportionate to the degree.

SYMPTOMS

In no other condition is it so imperative to weigh with the greatest care the slightest evidence of disease, nor is there a condition in which it is more difficult to impress the patient with the seriousness of the seemingly trivial manifestations than in cerebral arteriosclerosis; in no other is the fact of this seriousness brought so forcibly to the attention when it is too late to remedy as in the case of rupture or occlusion of the vessel.

Of the general symptoms of cerebral arteriosclerosis, headache stands first. This is usually dull, not throbbing, and quite often described as a feeling as if a tight band were compressing the head; it occurs most frequently in the morning after walking about and diminishes as the day advances—except in syphilis, in which case it is usually severe and at night. Dizziness or vertigo is next in importance. Numbness, tingling, twitching, weakness in a limb, or in one-half of the body, disturbances in articulation are also common. Collins recently attempted to group, as a definite clinical variety, a number of cases of cerebral arteriosclerosis. The subjective symptoms were few and often elicited with difficulty: "Headache, dull and fugitive; giddiness, with a sense of insecurity of station and gait not attributable to the giddiness; occasional emotional symptoms; change in general appearance with a characteristic gait and attitude and altered physiognomy. There is frequently a lowered blood pressure in this class of cases, 110 to 130 mm. (S.)." This is probably the result of the secondary cardiac weakness.

When more localized the symptoms may be divided into those just previous to a "stroke" and those during an attack; the former may be most readily described in the reports of cases which follow.

DIAGNOSIS

This usually presents little difficulty, particularly in advanced cases, if carefully studied, and especially if localizing symptoms be present. Obviously, it is important that the condition be recognized early, and it is here that the little things should be carefully weighed collectively. Increased blood pressure, increase in the force and lengthening of the first heart sound, accentuated second heart sound and an increase in the tidal wave of sloping ascent and delayed decline should lead to the suspicion of arteriosclerosis.

It is to be borne in mind that the high tension may be the result of other existing conditions, such as brain tumor, pulmonary disease, toxemia, overwork, etc., and in nervous strain it may be prolonged without sclerosis. If the tension is treated we may not be called on to treat the sclerosis. In the words of Thoma, "by avoiding the causes of increasing the blood pressure, by proper hygiene and regimen, serious and fatal vascular disease might be anticipated; if it became possible to recognize arteriosclerosis sufficiently early it would be easy to limit the danger of rupture of blood vessels and aneurismal formation." Again, it must be remembered that the condition of the general arterial system is not an index to the condition of the cerebral arteries and should not be given too much weight in excluding cerebral arteriosclerosis. The age and habit of the patient, the character of the headache and the time of its occurrence; vertigo, numbness and tingling, repeatedly occuring in the same locality; sclerosis of the retinal vessels as revealed by the ophthalmoscope; slight weakness of one side of the body with a tendency to favor the same side, should lead one to suspect the condition. The suspicion is strengthened by syncopal attacks, localized twitching or epileptiform seizures, transitory attacks of paresis, with aphasia or dysarthria, psychic symptoms and finally the occurrence of the so-called "stroke."

The ophthalmoscope is of the greatest service here; with it optic neuritis or atrophy may often be recognized at once, either of which speaks strongly against vascular disease. It is rare, if ever, that the optic nerve presents either change as a result of a purely vascular lesion. By it is revealed the condition of the central artery, which is one of the most important guides as to the state of the cerebral vessels.

A reflex lately described by Gordon shows promise of being of value in determining whether, in an attack, a vessel is occluded or not. It has been named the paradoxic reflex and is elicited by firm digital compression of the calf muscles at about the insertion of the gastrocnemii while the foot is resting and relaxed. If the pyramidal tracts are irritated there is extension of the toes with some separation, and if not, they are flexed or almost immobile. The reflex is present before the Babinski phenomenon. When complete occlusion occurs this reflex is lost and the Babinski becomes marked. In a case of thrombus (probably specific) observed recently, in which there was weakness of one side of the face and tongue, and slight weakness of the arm, this reflex was present and the Babinski absent on the same side. Contrary to orders, the patient was allowed to be up and about until complete hemiplegia supervened; the Babinski sign became marked and the paradoxic disappeared.

It would seem that transitory attacks of paresis of short duration are best explained by acute dilatations of the vessels rather than by occlusion or vasomotor spasm, particularly, if they subside on reduction of the blood pressure. This is also true of localized twitching. The fact that in many of these cases there is immediately following such an attack an increased strength, as shown by dynamometer record, on the side affected, is also noteworthy.

Stupor and coma are not infrequently associated with cerebral arteriosclerosis and may suggest uremia or other forms of toxemia.

From the fact that coma may be artificially induced by compression of the carotids it seems probable that interference with the cerebral circulation as a result of sclerosis, together with low tension, may alone induce such a state. A low blood pressure combined with a slow rate of pulse during coma should speak rather for sclerosis than uremia.

The prognosis before the attack is dependent on the degree and variety of the sclerosis and the obedience of the patient. In the main it is fairly good in either variety of arteriosclerosis if not so far advanced as to greatly impair the nutrition. Recurrences, however, are to be expected sooner or later, though, as had been stated, they may be postponed a considerable length of time. After the attack the chances of clearing an obstructed vessel are doubtful, and if a complete hemiplegia has occurred the use of the affected side will be proportionate to the ability of the opposite side of the brain to take up the function, together with the preventing of contractures. Hemorrhage is more often fatal and less promising.

TREATMENT

The all important factor is rest and quiet as soon as symptoms of a definite character are established. The diet should be carefully guarded. A constant peculiarity to be noted in most cases is the abnormal appetite; the patients veritably eat until they can not walk, and to keep the consumption of food down will be no little task, since they do not seem to appreciate the amount they are eating. While the patients are at rest the diet should be light, easily digestible and limited in quantity.

Iodin, notwithstanding opinions to the contrary, in view of its action in increasing katabolism and its tendency to attack those tissues most recently formed, is obviously of value here. It should be borne in mind, wever, that since increased blood pressure has been cause, this must first be met if the most pronounced ect of the medicament is to be obtained. The results with potassium iodid are much more prompt and marked if absolute rest is maintained than if not. Iodids are too often regarded as antisyphilitics and the administration of them is assumed to be indicated by reason of syphilitic disease. This is, however, not the case. Iodin is not antagonistic to the virus of the disease: it is, or should be, used only to remove the results of the disease—hyperplasia, granulomata, etc.—and is indicated when the same conditions exist as a result of other infections as well as those of syphilis.

Then the plan which I employ is as follows:

1. Absolute rest in bed.
2. Saline catharsis (preceded by calomel if necessary); magnesium sulphate or sodium phosphate may be employed. This is an effective means of keeping the tension moderate or low.
3. Potassium iodid, beginning with 10 minims and increasing a drop each day of the saturated solution until 50, 60 or 70 drops, three times daily, are reached. Should iodism be manifested, the iodid may be stopped for twenty-four hours and resumed where it was left off. After the maximum is reached it should be diminished until 30 or 20 drops are taken and then discontinued. A tonic may then be instituted, such as strychnin, beginning with 1/30 grain and later increasing to 1/24 or 1/20 grain. It is best given in the compound syrup of phosphates of the National Formulary, which is a rich phosphatic reconstructant.

If the hemoglobin is low, iron and arsenic may be alternated with the above.

If syphilis is a probability, the virus should be combated with mercury alone, as soon as possible, and followed by iodids and later with tonic chalybeates.

The so-called serums, such as Poehl's and that of Truneceek, antisclerosin and the like, which contain, in the main, sodium chlorid, sodium sulphate, sodium phosphate, sodium carbonate, magnesium phosphate and glycero-phosphate of calcium, are advocated, and some good results are claimed for them. They are best given after the more acute symptoms have subsided, such as twitching, localized weakness, numbness and tingling.

When sudden weakness, uncontrollable twitching or spasm come on suddenly and progress rapidly, nitroglycerin or sodium nitrite may be used with advantage until, by saline catharsis, the hypertension may be reduced. Thyroid extract has also been highly recommended for the control of the high tension.

Another remedy is deserving of more attention than it has received, namely, thiosinamin. This substance was first introduced by von Hebra in 1892, who found it of value in the treatment of lupus and old cicatrices. That it possesses the power of softening cicatricial tissue such as strictures, corneal opacities and adhesions at the base of chronic deafness has been frequently observed. I have used it with apparent good results. In one case of cerebellar gumma it was given following a very heavy course of iodid in view of the evidences of cyst, the capsule of the tumor having apparently resisted the iodid; the postmortem revealed a secondary hydrocephalus from obstruction to the foramen of Magendie, and a slight cavity at the point expected, communicating with the fourth ventricle, but no capsule.

It is given in substance or with milk sugar in increasing doses of from ½ to 2 grains.

In conclusion it may be stated that in the majority of these cases much may be done, but it is the physician who is best enabled to appreciate the danger avoided, for, as has been mentioned, few patients, and even those standing blindfolded, as it were, on the brink of a precipice, can be made to understand the seriousness of the probabilities until it is too late. The alternative may be truthfully and forcefully regarded as one between six or eight weeks in bed, on the one hand, and death, life in a wheel chair, or at least a permanent defectiveness, on the other.

REPORT OF CASES

Case 1.—*Patient.*—A man aged 52, whose family history was negative and whose early history was irrelevant, except that he had been a moderate drinker and had for some years suffered from asthma of emphysematous origin, with the usual chronic bronchitis. Specific disease was denied. He had had a gastric hemorrhage two years before; urine was normal.

History.—Within the year previous he had experienced an attack during which he was unable to articulate. This lasted about an hour. Following this he was well for some months, then another attack occurred in which he would misplace words in attempting to speak; he was aware of what he desired to say *though* he could *not* place his words properly. This attack was of about two hours' duration. Both were accompanied by dizziness and headaches were frequent, and attributed to other causes (indigestion, etc.). He was becoming sallow and ashen about the face. On Sept. 24, 1906, after a hearty meal, preceded by an appetizer, he occupied himself about the kitchen of his house, which was quite warm; he suddenly felt himself falling forward and to the right side, and in attempting to stand the same tendency to face to the right persisted, and he could not keep from going to the right side and striking the wall. During this or before there was no headache nor vertigo. Aphasia was absent. The pulse volume was markedly increased and the strength of the right side diminished. The anterior temporal arteries were quite prominent. After twelve hours' rest in bed and the use of circulatory depressants the strength of the affected side became increased above that of the unaffected side. The patient gained so rapidly that he could be kept at rest only for a few days. About six or seven months later he began one afternoon to experience twitching of the abdominal muscles of the right side. This subsided after the second 1/100 grain of nitroglycerin. Later he ate a very hearty dinner, preceded by liquor, and an hour later the twitching recurred rapidly, extended to the arm, and then a general convulsion followed with complete unconsciousness and biting of the tongue.

Examination, Treatment and Diagnosis.—When seen the patient was lying in bed, somewhat dazed and with some weakness of the right side. The pulse volume was very high, though slow in rate. The temporal arteries were seen to be very prominent and tortuous. The deep reflexes were increased about equally; superficials increased but no Babinski phenomenon. The patient was put to bed and at absolute rest for four weeks. Potassium iodid was given in increasing doses up to 50 drops, three times daily, and then reduced to 30, when tonic treatment including compound syrup of the phosphates was instituted. A complete change, objective and subjective, was the result, which persisted up to the time of the attack described below; there were no vertiginous attacks and no headache. The radials showed only moderate sclerosis while the retinal vessels were quite thickened and tortuous. There were no sensory symptoms. A nodular form of arteriosclerosis affecting the inferior external frontal and the ascending parietal branches of the middle cerebral with recurrent aneurism or sudden dilatation seems to coincide best with the clinical manifestations of this case. This diagnosis is supported by the suddenness of the onset as well as the rapid abatement of the symptoms following the lowering of blood pressure. The order of occurrence from below is interesting, as evidenced by the areas involved, namely, motor speech, coordinate speech, motor in extremities and abdominal followed by right-sided convulsion becoming general.

Course of Disease.—On arising and attempting to walk, Sept. 4, 1908, the patient found that his left foot dragged and his hand very weak, as a result of which he dropped several articles. He did not seek medical aid but persisted in going about aided by a cane. There was a decided clouding of the consciousness during the day. About noon he sought a Turkish bath, where he fell and was carried out shortly after entering and taken to his office, where he remained in a dazed state until late in the afternoon. He made his way to the telephone with great difficulty, summoned assistance and was taken to his home. On observation, the same evening, he was stuporous and inclined to be quite emotional. The left side of the body was almost motionless, cooler than the right, and, in short, presenting all the evidence of a left hemiplegia of thrombotic origin, including a positive Babinski phenomenon on the left side. He was removed to the hospital and placed in bed. On the day following the lower left half of the face, left arm and leg were involved and the motion was limited to slight movement of the arm from the shoulder. The treatment was substantially the same as in the previous attack. After about ten days the improvement was progressive. Twenty-four days after admission the plantar reflex became flexor in type. The finer movements of the fingers were gradually resumed and the patient returned to his business Oct. 12, 1908, thirty-eight days after the onset. This attack emphasizes the condition of the cerebral vessels and would seem to evidence the effect of the treatment, as regards the vessels of the left side of the brain, which were in the previous attacks the seat of disturbance.

Case 2.—*History.*—A bank teller of 28, who had previously enjoyed good health, and denied specific infection and alcoholics, on arising one morning, noticed that his left arm "felt funny"—felt warmer than the right, and fell to the side, jerking uncontrollably. This rapidly passed away and he went to work as usual feeling well but for pain over the right eye, which he had experienced before. Later he had an attack accompanied by headache in which the right fields of vision were blind. He stated that in looking at an amount intently he was able to see only the figures to the left of the decimal point. It was recalled that recently when he supposed he had placed bills in a certain compartment he would later find them on the floor; in other words, he was unable to trust his left hand without watching it. The attacks were of short duration. A few days later, on awakening, he became dizzy and would have fallen had he not caught himself with the right hand; his left was useless; there was headache over the left eye, the left side of the face was drawn and the tongue was protruded slightly to the right side. There was some numbness but not in the face or tongue. With the disappearance of the numbness, in about three and a half hours, he suddenly became possessed of the power of his arm and face.

Examination.—At this time the thermometer showed a constant lowered temperature of the left side. Dynamometer: Right, 335; left, 290. (The patient was right-handed.) The eyes showed no change other than a slight internal rotation of the left eye. Fields were normal. The retinal vessels were not tortuous though somewhat sclerotic and at places a whitish exudate was evident.

Diagnosis and Treatment.—In this case it was thought that a condition obtained in the posterior cerebral and pontile vessels somewhat similar to that which was believed to exist in the former case. Rest in bed with iodids, followed by tonic, was the treatment and there has been no recurrence since August, 1907.

Case 3.—*History.*—A man showing his age and hard work with a negative family and previous history was well until three months before the time of the first observation, when he fell on account of sudden weakness of his right side, though for three years he had been getting progressively weaker. On September 22, he fell and was unconscious for about fifteen minutes.

Examination.—The patient showed weakness of the right side. Dynamometer: Right, 100; left, 100. (The patient was right-handed.) Both radials were markedly atheromatous. The patient's memory was impaired for recent events. In speaking a drawl was evident. There was evident weakness of the right side of the body and the nasolabial fold was more marked on the left side. There was no change in the eyes except a considerable sclerosis of the retinal vessels.

Treatment and Course of Disease.—Treatment, beginning Oct. 24, 1906, was the same as the preceding. The notations on the chart show that with the increasing iodids the mental condition at first declined, urine passed involuntarily, restlessness increased and at times the right side seemed quite powerless. On November 2 there was twitching of the left side; November 7, involuntary defecation. On November 22 the iodids were discontinued; November 26, the patient was quieter, slept and ate much better; micturition and defecation were under control. On December 16 the iodids were resumed. Two days later there was stupor with stertorous breathing and dysphagia; consciousness was regained in about thirty hours; respiration became normal and dysphagia disappeared. On December 26 the patient walked without help, but his gait was very unsteady. On December 31 potassium iodid was discontinued at 30 drops and general diet ordered with tonic. On January 26 the patient was up and dressed; walked with the aid of a cane. On February 14 the iodids were resumed. Improvement was more rapid. On March 21 the iodid was discontinued at 46 drops and tonic resumed. On April 16 the patient was quite clear; walked unassisted and was dismissed from hospital. There has been no recurrence since, but mental enfeeblement is slowly progressing.

The diagnosis of cerebral arteriosclerosis with partial thrombus of the left side seemed to be justified.

The following case is reported not only to show the necessity of recognizing the early manifestations but the importance of insisting on rest as a part of the treatment, and also, since it seemed to show the action of iodin, in that it leaves the vessel affected in better condition than others.

Case 4.—*History.*—The patient was a woman of 69 with a negative family and previous history and the mother of nine children. Nine years before the present attack she became dizzy and fell forward and to the right while on the street, striking the right side of the face. For four years she had complained of headache and dizziness, during which she had attacks in which she would pitch forward, usually to the right side.

Examination.—The patient complained of twitching of the right side with considerable tingling and annoying prickling of the tongue on the same side. In walking she favored the right side. There was a coarse tremor on the same side. Dynamometer: Right, 100; left, 100. (The patient was right-handed.) After rest and treatment the strength became in seven days, right 154, left 140, and no recurrence until eight months later, when, about 11 a. m., the patient began to complain of numbness of the left hand and foot accompanied by irregular twitching. Pulse was high in tension and 60 per minute in rate.

Course of Disease.—Contrary to advice, the patient persisted in going about, and at 4 p. m. she began to weaken on the left side and slowly fell to the floor after an attempt to work. She was again cautioned to remain quiet. Orders were disobeyed and at 6 p. m. the same side began to weaken gradually, continuing to grow weaker until 2 a. m., when the entire left side was completely paralyzed. There had been no loss of consciousness and but slight dizziness. The course from this time was that of a completely occluding thrombus on the right side, and at present—two and a half years later—the patient is barely able to stand and has but a limited use of the hand.

Case 5.—This is one which was of the diffuse type and quite advanced in the cerebral vessels, especially those anteriorly located and at the base.

History.—The patient was a man aged 56, born in Maine, with a negative family history other than the fact that his mother died of tuberculosis. He had never used liquors and denied venereal disease emphatically. About December, 1906, he noticed a feeling of tightness in his head, as though "the top was coming off," which first occurred only on stooping. This was greatly relieved by taking a saline cathartic. There was no dizziness or numbness. About January, 1907, he became unsteady on his feet with a tendency to go to the left. About this time his tongue became thick and he had difficulty in speaking which was more marked after excitement. There was also some difficulty in writing. Shortly afterward he began to have headaches, more often in the occiput, aggravated by clerical work, and accompanied by nausea but no vomiting. There was no localized weakness nor numbness.

Examination.—The patient was a man of good color and well developed. The radial arteries showed only a moderate sclerosis and no nodules. Memory and attention were good. In writing the patient soon became unable to form letters, though he knew the proper rotation; and this inability was not associated with any peculiar sensation in the hands or arms. Dynamometer: Right, 250; left, 230. (The patient was right-handed). In walking with the eyes open he staggered to either side slightly, while when the eyes were closed the staggering was marked, though neither side was favored. There was no ataxia in the arms. The knee-jerks were increased and more so on the right side. Forearm reflexes were slightly increased. The plantar reflexes were very active, the right somewhat extensor in type. Tactile, pain, temperature, localization and postural senses were present and equal, though pain and temperature were somewhat delayed and uncertain. Stereognostic sense was present. External ocular motion was normal; the pupils were about 3.5 mm., equal and responded to light, accommodation and in convergence. Vision, O. D., 20/30; O. S., 20/30. The fields of vision were apparently normal. The fundi showed no changes except in the vessels, which were very sclerotic, the blood stream calling to mind a thermometer capillary tube. Hearing: Right, 14/24; left, 20/24. Taste of salt or sugar was not perceived on either side.

Course of Disease.—Soon after treatment the patient began to fail mentally in that he became indifferent, first to his business affairs, and later to everything. Urine and feces passed in bed with unconcern. His memory gradually failed. The weakness increased equally and with it a desire to sleep. When aroused he would reply to questions in a mumbling manner. There was no difficulty in swallowing at any time. The taking of iodids seemed to hasten the decline at each attempt at resumption. All treatment was ineffective and the patient gradually became weaker until his death, in October, 1907. Unfortunately no autopsy could be had.

Diagnosis.—There was here undoubtedly a condition of diffuse arteriosclerosis, as a result of which nutritional changes were advanced to a degree at which softening was encouraged by alteratives before the sclerosis was attacked.

316 Mack Block.

THE ABUSE OF SURGERY *

J. L. WIGGINS, M.D.

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The prevailing custom of requiring an annual address from the president of the association presents a delightful opportunity to scold without being scolded in return. I shall use the privilege to consider some of the abuses of surgery by amateur surgeons; by which I do not mean life-saving procedures at which it is impossible to secure an experienced operator, but operations of choice.

By the time the medical student graduates he is imbued with the idea that surgery is the only department of medicine worth considering; after serving a period as hospital interne he is still more firmly convinced of the truth of the idea. Everything that pertains to general practice finds him listless and uninterested: only an opportunity to shed blood wakes him up. The young practitioner's newly-furnished offices contain a profusion of surgical instruments and works on surgery; his single work on general practice is scarcely touched. After he has forgotten much that is indispensable for intelligent operative work, he perhaps attends a postgraduate school and is turned out, a finished surgeon, after a six weeks' course of instruction, during which he has been occupied mainly in watching an expert operator work at a distance.

A diploma from an accredited medical school to-day means much more than a similar diploma did twenty years ago. Higher preliminary requirements, a longer course of study, more thorough instruction, better clinical facilities and more capable teachers—all warrant the expectation of a higher degree of efficiency in the modern graduate. Yet such graduates have often disappointed reasonable expectations most woefully, while men with inferior advantages have far exceeded all anticipations.

The amateur in surgery sometimes excuses himself by the example of those who, beginning with apparently less equipment, have reached a position of assured proficiency. He says that he must begin some time to learn by experience as they did. This excuse would be valid if surgery were to-day what it was twenty years ago. Large clinics and postgraduate schools scarcely existed then. The operators and surgeons of twenty years ago did the best they could in the circumstances; they did much good and some harm. Attempts which were permissible or commendable then would be criminal to-day.

It takes more than the ability to cut and sew to make a surgeon. There is a wide distinction between the words "operator" and "surgeon," and a recent graduate, except in rare instances, is not competent even to operate. Skill, confidence and judgment in any vocation come from constant practice. No medical man would select an occasional operator to perform an important operation on himself or a member of his family. Their knowledge protects physicians; is not the public entitled to equal protection? Yet the law at present permits a licensed physician to rummage around in the abdomen at will, even though his previous surgical experiences may have been limited to the opening of an abscess. It is true that conditions are gradually readjusting themselves: but there ought to be some common basis of understanding as to the minimum qualification to be expected of one who elects to practice a specialty.

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* President's address before the Ohio Valley Medical Association, French Lick, Ind., Nov. 11, 1908.

In Germany the Prussian minister of public instruction, through the Scientific Commission for Medical Affairs, has addressed to the medical councils the suggestion,[1] on which they are expected to take authoritative action, that the right to use the title of specialist be restricted to those who have had a requisite amount of postgraduate training — three years, as a rule — obtained at officially recognized and approved institutes or under approved specialists. In Austria[2] a similar ruling has been submitted to the profession by the ministry of education, with the additional provision that no one is to be recognized as a specialist in more than one branch.

It would be scarcely practicable to adopt these rules in this country at the present time. Nor is it advisable that surgeons should be turned out by the gross, machine-made. A period of general practice will develop better surgical judgment and a higher sense of responsibility in a man than will the devitalizing moral atmosphere too frequently found in our large hospitals. Some such requirements as the following should, however, be enforced:

> A man who decides to specialize in surgery should file notice of his intention with the state board, and should be furnished by it with a list of accredited postgraduate schools. His course of special postgraduate study should be not less than one year long, and should give him a firm practical, as well as theoretical, basis for work. No one should be permitted to call himself a surgeon or to practice surgery unless specially licensed.

One of the advantages which would accrue from placing these restrictions on the practice of surgery would be the limitation of the supply of surgeons, for no matter how perfect the training, unless there be reasonable opportunity for practice, the hand soon loses its cunning and the judgment errs. It is reasonable to suppose that a creditable equipment of skill and judgment could be maintained by a surgeon drawing from a population of from 50.000 to 60.000.

Suppose that these requirements are in the main sufficient, and that they are enforced by law: have the profession and the public any right to make further demands? They have. Many details contribute to make the results of surgical operations vicious, passable or perfect, judged by our present standards. No one man, no matter how well equipped nor how resourceful he may be, can give proper attention to every detail of an operation. In order that his work may approach perfection, he owes it to himself, to the patient, and to the consulting physician to provide a trained assistant and an experienced anesthetizer. These should be as much a part of his armamentarium as his instruments and his knowledge. They should share his responsibilities in their individual departments. Nothing too severe can be said in condemnation of the vicious custom, almost a rule, of the operator drafting his assistants from those present. The surgeon is consulted presumably on account of his attainments, his experience and, let it be hoped, his honesty. It is a compliment which no man can ignore: under these conditions one who does not give the best of all he has is unworthy. He owes it to himself, to his consultant and, most of all, to his defenseless patient, that every avenue of possible danger be safeguarded. The assistant who is unacquainted with the surgeon's individual methods not only does not assist, but in many instances interferes with the operator, often inadvertently courting complications by some simple error of omission or commission. When the question is one of health or illness, life or death, sentiment should not outweigh duty. The surgeon's object, once understood, will be appreciated, and no earnest physician will withhold cooperation in attaining the best results for his patient. It may be urged in objection that trained assistants are rare outside of large hospitals or exceptional conditions, and that one doing a restricted amount of work is unable to maintain such assistance: yet I have personal knowledge of at least a score of men in smaller cities who have perfected an organization composed of a few men who, while engaged in general practice, have found it possible to attain a high degree of proficiency as assistants. These men have found this association indispensable. The degree of efficiency may not be as high as that maintained in the larger clinics, but it is worthy of commendation.

One of the most valuable assets in any community is the educated, capable and honest family physician. His position is assured. He should not, and he will not, be displaced by the specialist, no matter how gifted. The welfare of his community is in his keeping. It is his family. Try as he may, he can not escape the moral obligations that rest on him. He is the first consulted; and when he deems a disease amenable only to surgical procedure his opinion is sought in regard to the surgeon who may be safely trusted. At times he may err, but there is small danger when he is actuated by honest impulses.

I reiterate that my purpose is not to discourage honest effort, if the means employed in preliminary preparation are in keeping with the responsibilities of the work. I only desire to call attention to existing evils, and to arouse public opinion to condemn or, if need be, to restrain this wild scramble of incompetent aspirants for perquisites and honors unearned and unmerited.

11½ North Main Street.

ADVANTAGES AND DIFFICULTIES OF PUBLICITY IN CONNECTION WITH MUNICIPAL PUBLIC HEALTH WORK *

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Education of the public is one of the most fundamental necessities in all public health work. Our efforts to reach the public are of two kinds: first, to educate them directly on matters of sanitation and personal hygiene, whereby they may be taught to do their share of the general work for the improvement of the public health, and, second, to acquaint them with the immediate work of *their own local department of health.*

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[1] Berlin Letter, The Journal A. M. A., Sept. 19, 1908, p. 1024.
[2] Vienna Letter, The Journal A. M. A., Oct. 3, 1908, p. 1167.

* Read before the Section of Municipal Health Officers at the thirty-sixth annual meeting of the American Public Health Association, Winnipeg, Manitoba, Aug. 25-28, 1908.

The first kind of publicity has been fully discussed both in the annual address of the President of the American Medical Association[1] and in the report of the Board of Public Instruction of the same Association.[2] I shall, therefore, confine myself to the second phase of the subject.

In our efforts to apply the teachings of sanitary science in our own community, we are constantly hampered by the passive opposition of ignorance and indifference and the active opposition of obstinacy and selfish interests of certain classes, all of which can be combated best by keeping the public informed on the policies of the health department. Again, opposition arises from the feeling that our knowledge of preventive medicine is imperfect. None can be more painfully aware than are we health officers ourselves of that fact, yet there is no community in this country in which the health department is allowed to give to the public the full practical benefit of firmly established sanitary principles. When practice has caught up with the teachings of sanitary science, then it will be time enough to base arguments on the imperfections of that science itself. Since this attitude of opposition is assumed chiefly by the ignorant, publicity is here, too, the logical remedy.

Let us take the subject of tuberculosis as an example. The public must be shown what the mortality from tuberculosis is right at home, what it costs their own city each year, what local conditions have a special bearing on the problem (and it must be made very plain that in their own community there exist the same opportunities for successful work that are found in those places in which the campaign is already far advanced), and how their own local department of health purposes dealing with the problem.

If the community is one in which nothing has previously been done, articles should be published in the daily papers showing why registration of cases is regarded as the first step, explaining just what is meant by registration, and endeavoring to remove the prejudice which naturally exists against this measure. Naturally, at the same time, the doctors of the city should be reached by special means and the matter discussed from their standpoint, through circular letters and by announcements before the local medical society, but this does not belong to the aspect of the subject which is under discussion.

Next, articles should be published in connection with the passage of an antispitting law and later with its enforcement. In the same way, publicity will aid in having free bacteriologic examination of sputum; the public should know what this is for, what it can and what it can not accomplish. They should appreciate the necessity of such work as this being paid for by the city itself.

Later on, the health department will probably start its dispensaries for consumption. Several articles will then be needed, to explain, first of all, the necessity of furnishing free advice and treatment for those who are unable to pay for it, who would, therefore, inevitably go from bad to worse and finally die, and who would, meanwhile, be a constant menace to the community. It should also be explained why the dispensary is the logical precursor of the sanatorium and the hospital for tuberculosis. Then, after the dispensaries are established, articles will be needed from time to time giving accounts of their workings, telling of the number of patients treated and selecting a few cases to bring out the fact that cure (or arrest of the disease) is being secured in many instances, describing conditions found in the homes by the visiting nurses, and showing that such places are menaces to the community unless they are under control.

The more completely the public has the workings of the health department placed before them at each stage of progress, the more active the people will be in lending their cordial support to every move and the less damage can be done by those individuals (present in every community) who oppose every step in advance. The health officer should, therefore, endeavor to keep the public informed as to what is being done. But this is not always easy. If it were possible for the health officer himself to write the articles (including the headlines) exactly as he wished them to appear, and if the newspapers would then publish them in just that form, neither adding to them nor cutting, the chief difficulties of the problem would be solved. But it is obviously impossible for the health officer always to find time for this and, besides, many excellent health officers would make a failure of just this kind of work, skill in popular writing not being one of the prime accomplishments demanded of our profession.

The health officer, being thus forced to rely almost entirely on the newspaper staff for putting these articles into shape, encounters two classes of difficulties. The first arises from the impossibility of getting the papers to follow up any of the work of the health department in a systematic manner, and the second is due to the unfortunate tendency to sensationalism shown by all our newspapers.

There is scarcely a paper in the country which can manage to present to its readers a logical series of articles extending over a considerable period of time and dealing, for example, with such a subject as the local tuberculosis campaign. To the ordinary reporter, each day's facts are good only for a special "story," rather than for merely one chapter of the whole consecutive account of plans and work. This difficulty is almost insurmountable. It would not be so hopeless if one reporter on each paper were regularly assigned to the work, but it often happens that, after the health officer has spent many hours in getting some obliging reporter to understand somewhat fully the plans of the health department, an entirely new reporter shows up some day as his successor on the city hall assignment and treats the facts given him as if they were some entirely new matter (as, indeed, they are to him) with which the department is dealing for the first time.

Naturally editors endeavor to give the public exactly what they want. Most persons, reading their papers hastily and imperfectly, would not carry in their minds, from day to day and from week to week, the thread of what had gone before. Until the public itself has become even more actively aroused to the possibilities of preventive medicine as a subject in which each one should himself be vitally interested, and until, in consequence, information along these lines is as eagerly sought as is the daily instalment in a long-drawn-out murder trial, it would seem that the difficulty under immediate discussion must remain unsolved.

The tendency to sensationalism on the part of our daily papers stands always in the way of such publicity as the health officer desires. Every reporter is on the lookout for good "stories," and, therefore, those points which the health officer wishes especially to emphasize are fairly certain of receiving less attention than other phases of the subject. This often results in articles which are either utterly misleading or which dismiss in a few words the features which are essential from a public health point of view and give undue prominence to some side fact or incident, and this, through liberal embellishment by the reporter, is made to furnish not only the main part of the article, but also the wonderful headlines under which it appears.

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[1] Burrell, Herbert L.: A New Duty of the Medical Profession; the Education of the Public in Scientific Medicine, The Journal A. M. A., June 6, 1908, l, 1873.

[2] The Journal A. M. A., May 23, 1908, l, 1742.

One of the most striking and annoying incidents of this kind in my own experience occurred in the winter of 1907. Late one afternoon I was called up by telephone from the office of the president of the Richmond, Fredericksburg & Potomac Railroad, and told that there were two negro smallpox suspects on the south-bound train, due in Richmond at 7:15. They had boarded the train at Baltimore, but the conductor had not had his suspicions aroused until after leaving Washington.

I was informed that the president of the railroad desired to do whatever the health department of this city required. I at once replied that the train must be held at Acca, a station three miles outside of Richmond, until I got there. Although the train was the through Florida express, crowded as it always is in midwinter, the president at once agreed. It was less than an hour and a half before the time that the train was due in Richmond, which meant a little over an hour before it was due at Acca. After much difficulty I succeeded in finding our diagnostician, and set out for the four-mile drive from the center of the city.

At Acca we found the train standing on the track, where it had been for ten or fifteen minutes. The suspects were locked in a coach to themselves. They showed excellent recent vaccination scars and were found to have nothing more serious than measles. The train was allowed to proceed, with the trainmen under instructions to keep the coach locked until the men were put off at their destination, a few miles south of Richmond, and to bring it back to Richmond next morning for fumigation—not so much because this was thought to be necessary as to allay any criticism against the railroad.

Two days afterward I incidentally told a reporter on one of our afternoon papers of this occurrence for the purpose of illustrating the excellent manner in which every one was trying to cooperate with our newly organized health department, and expressed special satisfaction with the action of the railroad president.

But when the paper came out, there on the first page, extending across a double column, were the glaring headlines: "Health Chief Levy Holds Up a Train. Smallpox Suspects Bound for Richmond Detained at Acca. Doctors Win Wild Race Against Time in the Night!" Under this appeared a most thrilling account of how the health department had learned of the suspected cases; how, with only an hour to spare, the health officer had summoned the diagnostician and jumped into the buggy. "With a cold north wind chilling them to the marrow, the two physicians, plying the whip frequently and vigorously to the spirited steed that drew the light buggy, made their wild race against time, over snow and ice-covered roads cloaked in Stygian darkness," and arrived just as the headlight of the engine appeared. (Of course, it would never have done, from a dramatic standpoint, to have had the train standing when they arrived!) As the train slowed down, the health officer had flashed his badge and called on the engineer and conductor to halt. After much protest they did so. Even reportorial ingenuity could make nothing of the dénouement, and the story ended with the anticlimax of the verdict of measles.

Naturally, the railroad president, having the interests of his road deeply at heart, was much annoyed by this account. He complained bitterly of the injury done himself and his road, stating—which was perfectly true—that the department would have known nothing of the matter if he had not himself informed us. The whole matter was finally adjusted by a communication setting forth the facts and disclaiming responsibility for the reporter's account. To this day, however, this incident might affect the readiness with which we would be given information in similar cases.

In order to have correct accounts appear in the daily papers, there is but one course, and that is to write exactly what one wishes to have published. But this is utterly impracticable as a matter of routine. The reporter drops in for a minute to ask, "Anything to-day?" Or, perhaps, he wishes some specific information as to prevalent health conditions. He has been through the city hall, getting reports of police court cases here, marriage licenses there, building inspector's permits elsewhere, and so on through the building. To him, only happenings of the day are good for "stories." The information of this kind to be had in the office of the health department is ordinarily little, and he has a natural tendency to dress it up to suit himself.

Not even by actually writing an article oneself can this sensationalism be completely guarded against. There still remain the unknowable editorial or reportorial introduction and the ever-present peril of headlines which are not borne out by what appears beneath them. I recall an occasion when, at the request of the city editor, I wrote a two-and-a-half-column article on the milk supply of Richmond, to appear in Sunday's paper. In order to have it certain to appear correctly, I asked to see proof and was allowed to do so. By the merest accident, when I went back with this proof, the compositor happened to bring into the editorial room his proof of the headlines which the editor had himself prepared. These lines would have created an impression exactly opposite to that which I had aimed to produce in the article itself.

This account of the difficulties of securing thorough cooperation on the part of the press must not be taken as too strong a protest against the methods of editors and reporters. It merely shows a side of the publicity question which must always be borne in mind. We must, on the other side, never forget that newspapers are not conducted primarily for the benefit of our departments and that we can not, therefore, have all these things managed just as we would like.

In spite of all these difficulties, on the whole the advantages of newspaper publicity far outweigh the occasional drawbacks. Perhaps even the sensationalism which is so repugnant to the health officer may not be altogether bad. Certainly it secures a hearing from men and women who in these strenuous times demand highly seasoned pabulum and who, in their hurried reading of the newspaper as they go to and from their work, will not deliberately select and read an article which promises no excitement, even though that article may inform them on vitally important matters relating to their own well-being.' If even an occasional fact of this kind can be made to enter their consciousness along with the more highly seasoned story of the reporter, some good has been done. It is the business of newspaper men to study and learn the methods of reaching the reading public. After all, may not the editor and the reporter understand these matters better than we, and may not the very parts of their stories which irritate and annoy the health officer be the only thing which secures a hearing for us at all in certain quarters where we wish most to be heard?

Certainly, if the newspapers err in their manner of presentation, on the other hand, there is never a time when they will not willingly give any desired amount of space to public health questions. I myself have never encountered a refusal, not even when asking, late on Saturday, for a considerable amount of space in Sunday's paper. Our Richmond papers have repeatedly gone so far, when requested, as to publish in full articles which have appeared in either the morning paper of the same day or the afternoon paper of the day before, and this is a severe test of their friendship, as no newspaper relishes this course.

The health officer may legitimately use, in his efforts to reach the public for its own good, other means, which space will not permit me to discuss here. Monthly or weekly bulletins, special bulletins dealing with matters of special importance, lectures to the general public and to school teachers and children, and even the present-day moving-picture shows, are all means which have much to commend them.

In these, too, the advantages are to some extent offset by peculiar difficulties, and these must either be conquered or else endured as being more than counterbalanced by the good that can be done. The health officer will always find some who are ready to criticize his every attempt in this direction as a mere effort at self-advertising. This, too, he must make the best of, being at all times watchful lest, in spite of himself, this element enter actually into the case. Then, knowing his real motives, he may, with such philosophy as he may command, accept these criticisms, as he must learn to accept the hundreds of others which assail every public servant who regards public office as a public trust.

615 East Franklin Street.

PLEASURES AND HOPES OF THE HEALTH OFFICER *

CHARLES V. CHAPIN, M.D.

PROVIDENCE, R. I.

When Dr. Durgin asked me to write about the pleasures of a health officer I felt that my task was akin to that of the naturalist who essayed the well-known work on the snakes of Ireland. But I remember that my father, who was much interested in ornithology, once shot a white blackbird, and members of the American Public Health Association, familiar as they doubtless are with the principles of biology and with the strange mutations which from time to time appear among plants and animals, may consider it not entirely hopeless to search for pleasure in the routine of a health officer's life.

In the first place the health officer may usually draw his salary. This, however, is probably not a very great pleasure, and, indeed, on looking up the matter some time since I found that there were many small communities (and this word small may be taken in more senses than one) in which even this pleasure was denied him.

We are told that one of the greatest enjoyments in life is to feel that one's pay is earned by honest labor. This is certainly a pleasure that is within the reach of every health officer, though it may be denied to some unhappy railroad magnates, insurance presidents and promoters of mining propositions. There is no health officer who does not find plenty of work, and there are few who neglect their duties—surely none of the members of our new section. The pleasure of duty well done, which is, indeed, no mean pleasure, is possible for each of us. Rarely can we expect more. The plaudits of the world are not for us. A man's pocket is his most sensitive point, and his liberty is almost as dear as life. Our business, daily and hourly, leads to the depletion of men's pockets and the restriction of their liberty. We can not expect the thanks of those who feel themselves aggrieved. If the neighbor who has been relieved of a long-standing nuisance, or the man who has been saved from rabies by the Pasteur treatment, or the community which has had a smallpox outbreak checked by efficient action, have a good word for us we are more than content. Yet strange things may happen. I have heard of a clergyman, separated from his family by the health officer during a long siege of scarlet fever, who sent a present in token of considerate treatment, and of a family removed to the smallpox hospital who afterward expressed satisfaction that they were not left at home with all the annoyances and trials that home isolation would have involved. The farmer, too, has been known to have a change of heart and to thank the health officer for requiring him to free his herd from tuberculosis; and even the mill owner has in time been led to see the advantages of the improved ventilation that was forced on him. Perhaps even a newspaper which has been bitter in its attacks later comes to advocate the policy which it formerly opposed. These are the white blackbirds which occasionally fly across our field of vision.

To do our duty day by day is, indeed, a pleasure; to abate nuisances, to isolate contagious diseases promptly, to examine school children, to license hogs, to listen patiently to complaints, to diagnose doubtful cases, to record births and deaths, to distribute milk for babies, to vaccinate, to kill mosquitoes, to give out antitoxin, to inspect baby farms, to examine dogs' brains, to distribute circulars, to make blood tests, to back up the family physicians, to keep the reporters good-natured, to answer fool questions, are all in the day's work. Certain things, of which the above items are a mere suggestion, are by common consent required of the health officer. Extensive routine procedures are laid down by the authorities in the text-books on sanitary science. But the health officer, however faithful, who gets into a rut is not doing his full duty. Do not blindly follow obsolete works on municipal sanitation. Sanitation is by no means a finished art, though, judging from the methods employed in some cities, one might suspect the contrary. Every day brings some discovery in the sphere of sanitary science, and every day develops some new application or modification of our art. There can be little comfort in being behindhand in the race. Do not wait for a meeting of the American Public Health Association to be spurred to progress. Keep moving

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* Read before the Section on Municipal Sanitation of the American Public Health Association, Winnipeg, Sept. 12, 1908

yourself. Half the pleasure in one's work is in keeping abreast of the times, in taking the best journals, in keeping in touch with the latest discoveries, and in learning what the scientific men of all lands are doing in bacteriology, micro-zoology, biochemistry, serotherapy, vital statistics, and epidemiology, as well as in the more prosaic fields of practical sanitation. If you have not tried it, you can little realize to what pleasure the subscription to, and perusal of, the *Index Medicus* will lead.

A very good friend of mine had inscribed over the fireplace in his club the motto, "Don't Take Yourself Seriously." That is doubtless an excellent motto for a club, for in our social intercourse nothing wearies us so much as the man who can see nothing beyond his own work and aims, and who insists that what is important for him must be important for everybody else. The health officer should not talk sanitation at his club (if he can afford to belong to one) or to his family, or to his bosom friends. He should realize that perhaps religion, and art, and commerce, and agriculture, and even golf and bridge, have their place in the world. While it is folly for the health officer to be serious at all times, and particularly to strive to compel everyone else to make hygiene the chief object of life, yet I firmly believe that he ought to take his business very seriously. Otherwise much pleasure may be lost to himself, and perhaps some good to the world. Even my friend who would bar the serious man from his club, as a manufacturer takes himself as seriously, and successfully so, as any man in the busy little state of Rhode Island.

Sanitary science is an important and fascinating science. Practical sanitation is as immediately useful as any work that man can do. I am afraid that, even with all our glib talk about the value of human life and health, we do not have a full and serious comprehension of our profession. If we did we would make greater effort to perfect our methods and to add something to the store of scientific truth. The greatest pleasure which a health officer can possibly have is to have done something to advance his profession. You and I may not be able to devise a system of school inspection like Dr. Durgin, to inaugurate municipal warfare against tuberculosis like Dr. Biggs, to establish milk depots like Nathan Straus, to invent novel methods of sanitation as has Col. Gorgas at Havana and Panama, to discover the etiology of a disease like Drs. Reed and Carroll, or to find a curative serum like Dr. Flexner; but it should be the ambition, and the reasonable ambition, of every one to add some stone, however small, to the structure of our science, or to improve, however slightly, our practice. We can at least record deaths with accuracy, prepare tables with care, make family histories in cases of contagious disease and note the facts of isolation, disinfection, hospital treatment, vaccination and the use of sera. Every man can learn to observe and to record, and what we want is facts, facts, facts. Every health officer can, and should, write a good report, one which will be a real help to every student of sanitary problems. We must realize how little we know and how much there is to learn. It will then be a duty and the greatest of pleasures to do something, however little, to add something to the mass of scientific knowledge, which some day in the crucible of a mind greater than ours will yield a truth that will bring our science and our art one step nearer the exactness which is our goal.

As for the hopes of health officers, as we are optimists, we have many. We hope for the establishment of a national bureau of health, and we hope that it will not be planned by clergymen, or college presidents, or politicians. We hope that some time the Public Health Reports will be filled with useful information. We hope that every local unit of government will have its health officer, and that the ice-man and the undertaker will not be considered suitable candidates, but that every health officer will be trained for his work. We hope that he will receive a reasonable reward for his services, and that the pay for saving a child's life with antitoxin will at least equal that received by a plumber for mending a leaky pipe; and that for managing a yellow-fever outbreak a man may receive as much per week as a catcher on a baseball nine. We hope that the writers of text-books will some day tell their readers how rare is a typical case of scarlet fever or typhoid fever, and that the medical schools will teach their students that medical science really exists, and that they should not be mere mechanics. We hope some day to issue a permit for the burial of the last doctor who thinks he can diagnose diphtheria and smallpox with his nose; we hope for the day when superstition shall have been banished from therapeutics and when the newspapers shall have forgotten the sewer-gas bogey. We can not expect that figures will ever cease to lie, but we may hope that vital statisticians will. We hope that someone will discover the germ of measles, and of scarlet fever, and will tell us the mode of infection in smallpox and tuberculosis, and why, while so many are carrying the pneumococcus, so few develop pneumonia, and will explain how the fresh-air cure cures. We hope some one will tell us why we condemn beef from the tuberculous cattle, which has never been known to kill any one, and allow the sale of trichina-infected pork, which has killed many, and why we forbid the sale of immature veal because it is indigestible, but do not interfere with the serving of Welsh rarebit! In fine, we hope for the steady advancement of sanitary science and the steady improvement of sanitary practice, and we hope, and are sure, that the new municipal section which is born here in Winnipeg will be a powerful factor for both.

FOOD INTOXICATION IN INFANCY *

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We are all familiar with the fact that disturbances of the alimentary tract, such as indigestion, summer complaint, ileocolitis, cholera infantum, etc., are commonly accompanied by more or less profound nervous symptoms that in their totality make up the clinical picture of an intoxication. The babies thus affected are listless, drowsy, stuporous, heavy-eyed, with eyes fixed on vacancy, are hard to rouse and quickly sink back into their stupor, which in severe cases may amount to coma. They look as if under the influence of a drug, as if poisoned or intoxicated or "dopey." We have become so accustomed to thinking that such intoxications, characterized as they are by fever, leucocytosis, psychic depression, collapse and evidences of indigestion or enteritis, must be due to a bacterial toxin that a simpler explanation has escaped us. In a series of papers that will serve as models of profoundly critical and convincthe condition of the child is at the time of the proposed change.

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* Read before the Twelfth Councilor District Medical Society, Fort Wayne, Ind., Oct. 26, 1908.

The thought naturally occurs that one must be very heroic to take all food away from a baby that seems starving as it is, and especially before parents whose one thought is to get the baby back on its food again. The difficulty is not nearly as great as one might think. As far as the baby is concerned, if the hypothesis of a food intoxication is true, it is evident that the baby can not be too weak or too near starved, but that the absence of food will be better for it than to increase its intoxication by giving more. The baby is now weak and sick, not from hunger but from a food intoxication. If it can stand it, removing its food will leave it hungry but convalescent. If it can not stand the starvation it is manifestly doomed. Even in cases that seem hopeless the change that is often produced in one day by simply removing the food is so evident that one soon loses that fear of too prolonged starvation that is bound to possess one at first.

As to the parents, it is my experience that there is practically no difficulty in getting a mother of average intelligence to do anything for the baby that is explained to her and seems reasonable. If she is told that there is a food intoxication, she can easily be led to see that the thing to do is to remove the food. When she sees what a wonderful change this produces within twenty-four hours, with no other treatment, she is just as convinced and enthusiastic as the doctor. It becomes a very common experience that mothers whose babies easily exceed their food tolerance will call up the doctor at the end of the twenty-four-hour fast that they have instituted themselves. They know very well that the fast was indicated, and now they want to know whether it was long enough and if so how much and what food they can give. In very severe cases, in which prolonged absence of food is indicated and one is not sure about the mother, one can give what looks like a gradual increase of food, say water, then tea, then albumin water or barley water, any one of which is harmless, at least after the first twenty-four hours, and yet will satisfy the mother, while the baby is getting the necessary starvation.

Is there any way of recognizing an impending intoxication so that it can be warded off? An intoxication never bursts forth fully developed. It is always preceded by prodromata that are usually easy to recognize. These may be of long or of very short duration. This is best shown in the cases that accompany digestive or nutritional disturbances. The child becomes unusually fretful and cries much of the time. It fails to gain, or even loses, the weight varying widely from day to day. The bowel movements show decided evidence of indigestion, are more frequent in number, four to five or six times a day, pale in color, or greenish, sour and irritating. If to this is added a variable temperature with occasional spurts of fever up to 100 or 101 not due to some other evident cause, there is an impending intoxication. The temperature of a healthy baby is remarkably constant. In hospital babies in which the temperature and all of the symptoms are quickly recognized we can see these cases coming on, gradually increasing in severity, and passing over without interruption into a full-fledged intoxication. In the prodromal stage it is only necessary to lessen the food to a safe amount and the symptoms will disappear. Mothers are quick to learn the significance of the prodromal stage, and after one or two experiences will tide the baby over the danger themselves the next time by lessening the amount of food.

In the prophylaxis, further, of intoxication, overfeeding must be avoided, absolutely in health and relatively in sickness. The practical value of a strict caloric control of the healthy infant's dietary along the lines laid down by Heubner can hardly be overestimated as a check on overfeeding and the resulting intoxications. In acute illness of any kind that lowers the general condition of the infant the food should be lessened to a safe amount and in a definite manner. Since fat is the chief disturbing element in infant-feeding, it would be unwise to use cream mixtures, and for several years we have used no cream whatever in our diet kitchen at Northwestern University Medical School. In the prodromal dyspeptic stage of an intoxication we have come to fear even diluted whole milk, and have found the partial or complete temporary elimination of fat one of our most valuable therapeutic measures. It is evident that we must guard against the use of too much sugar in our mixtures, and that such foods as condensed milk, malted milk, etc., should be used with great caution if for any reason they should seem indicated. The adoption of a four-hour interval as the usual one between feedings would do much toward the prophylaxis of overfeeding and so of intoxication.

The relation of human milk to these food intoxications is of peculiar interest. We are accustomed to think of mother's milk as the last resort—that if this fails there is no use trying anything else. Doubtless many of us have in extreme cases placed a child on human milk and have been surprised at the sudden and emphatically serious change for the worse. We have here one of the strongest confirmations of the truth of the theory of a food intoxication. If a child in a state of intoxication can not stand fat and sugar there is no reason why it should bear them any better because incorporated in human milk. There is a vast difference in many ways between human and cow's milk fat, and yet they both act as fat in this connection. Salge has demonstrated that these babies can stand a large amount of centrifuged human fat-free milk, though a very small amount of whole milk would produce serious results. A baby can indeed become intoxicated on human milk, disintoxicated on water, reintoxicated on human milk and even on a skimmed or siphoned human milk that is not nearly fat-free, redisintoxicated on water, and then carried safely through convalescence on a centrifuged cow's milk that is practically fat-free. In other words, as we would expect theoretically, an intoxicated baby that can not take human milk will still be able to take a fat-free cow's milk. This is shown in the following case:

Case 3.—Baby S. (Figs. 1 and 2), aged 6 weeks, had been at the breast and well till four days before examination (July 28, 1908); since then had had a violent diarrhea, ten to fifteen bowel movements daily; did not vomit. Temperature was 100. It had nursed every one or two hours and appeared severely intoxicated. The baby was put on water; it was not to nurse.

July 29: The baby had taken little water. The mother gave it the breast once, possibly oftener. The baby was much worse, in extreme collapse, slightly cyanotic, and semi-comatose, with eyes sunken, half open, dry and fixed (Fig. 1). Temperature was 100. The child's condition seemed hopeless, but it was taken to Wesley Hospital. Tea with saccharin was given by mouth and normal salt solution by rectum.

July 30: The baby was brighter; cried a good deal; and still looked intoxicated. The tissues were hard and stiff. Temperature was 98 to 100. Normal salt solution was stopped and 3 ounces of siphoned human skimmed milk given with tea this afternoon and during the night.

July 31: The baby was decidedly better this morning; looked brighter, and presented practically no evidence of intoxication. There were seven greenish-yellow bowel movements, some curds, normal odor and color. Temperature was 98.6 to 99.8. The allowance of skimmed human milk was increased to 5¾ ounces in tea.

August 1: The baby was not nearly so well; looked drowsy, heavy-eyed and "dopey" again; was very pale and hard to rouse. It was almost impossible to get it to take the bottle. It seemed nearly as sick as when first seen. Temperature was 99.2. There was six bowel movements. On account of relapse the child was put on equal parts of fat-free cow's milk and water, alternating every two hours with albumin-water.

August 2: The child was brighter again. Temperature was 99.8. There were five bowel movements, smooth and well digested. The child improved steadily on this and by the end of the week was bright, had a better color and took its food eagerly. During the second week it gained 14 ounces on a fat-free cow's milk, barley-water and sugar mixture, with the addition of a little nursing from the mother. The baby was discharged on the fourteenth day in excellent condition in every way.

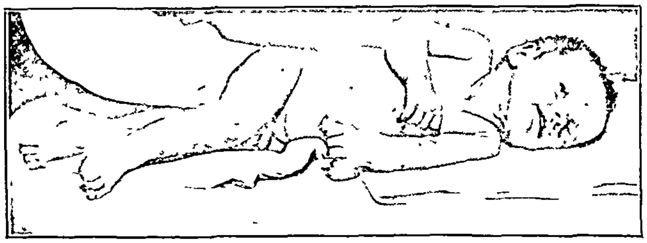

Fig. 1.—Baby S. (Case 3), 6-weeks-old, weight, 7 pounds 10½ ounces. Intoxication on mother's milk. July 29, 1908.

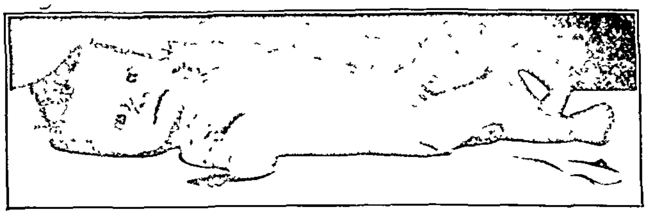

Fig 2—Baby S (Case 3), after one day of water diet; weight 7 pounds 9½ ounces July 30, 1908.

The fact that human milk may be but little less dangerous than cow's milk in its relation to intoxications is of great practical value in those cases in which we use a wet nurse as a last resort. It is manifestly not wise to put such a baby, one whose food tolerance is very narrow, at once on food so rich in fat and sugar as that given by the breast. We must proceed with extreme caution. If there is still an unfavorable reaction to minimal amounts the child may yet be saved on fat-free cow's milk or, as the last resort, on fat-free human milk. The following case illustrated this:

Case 4.—Baby S., aged 7 months, weight 9 pounds, had nursed only a short time and had never gained as it should. It easily reached the limit of milk toleration. This was a typical case of malnutrition.

November 30: The child was somewhat overfed on milk, 12 ounces; barley-water, 18 ounces; milk-sugar, 1 ounce, and malt extract, ¼ ounce. The baby was pale, restless, cried a great deal and was constipated. It was put on water for twenty-four hours.

December 1: The child slept well and was better in every way. It was put on the same food, omitting the malt extract.

December 2: The baby was good for one-half day: then had a miserable night, was fretful and cried a great deal. The bowel movement was slimy and frothy. The child's weight was 9 pounds. It was put again on barley-water without sugar for twenty-four hours to prepare it for the wet-nurse. Temperature was normal.

December 3: The baby took the breast with abundance of milk every four hours; seemed perfectly contented and comfortable. Its weight was 9¼ pounds.

December 4: The baby had a restless night, looked pale, not as well; it had two grayish-yellow, greasy bowel movements. Its weight was 8¾ pounds.

December 5: The baby was very much worse. As the mother said, he was "really sick for the first time in his life," was peevish and fretful for the first part of the twenty-four hours, then listless and waxy, drooping heavy eyes, taking no notice of his surroundings, but wanting to be let alone. The child had the typical appearance of intoxication; was "feverish," according to the mother. Temperature now was only 98.6. One-half teaspoonful of castor oil was given and the child put on barley-water with saccharin.

December 6: The child was very much better; smiled and had wholly lost the intoxicated look but was still very weak. Its eyes were clear; temperature normal. The baby was put on centrifuged fat-free cow's milk, 5 ounces in twenty-four hour food with barley-water.

December 7: The baby was as bright as before it took the breast. The skimmed milk was increased to 10 ounces, and on the following day to 12 ounces and ½ ounce of sugar. Convalescence was uninterrupted on fat-free cow's milk, barley-water and sugar.

The views that I have expressed here have hardly yet entered into our literature. To my mind, they carry in a large measure their own conviction with them. To some of us they appealed at once because they illuminated wholly many a dark corner in our past experience. With this knowledge we could have saved many a baby that we literally fed to death. To one who is in doubt about the truth of the things that Finkelstein has taught us I can only say: Use this idea as a working hypothesis as we have done, and see how many babies you can save who otherwise might die. Still more important, see how many babies you can keep from getting to that point by bearing in mind the pathogenesis of food intoxication.

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THE PHARMACOPEIAL REVISION METHODS OF FOREIGN COUNTRIES

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As it was thought that a comparison of the pharmacopeial methods in other countries might be of service in considering the revision of our own national standard, a list of queries relative to pharmacopeial revision was sent to correspondents in eleven of the leading countries of the world.

The list of topics included size and personnel of revision commission: frequency of revision; time taken in preparing new edition: tenure of revision commission; and issuing of supplements.

Out of the eleven persons addressed, answers came from nine, no responses being received from Greece and Sweden. The data obtained from the other countries was as follows:

Austria.—Present issue, Jan. 1, 1907: prepared by commission, which was appointed by the government, and is composed of 5 physicians, who are professors of the University of Vienna and members of the Supreme Board of Health. Revision was begun Jan. 1, 1905, and finished in November, 1906.

The pharmacopeia is revised every ten years and a supplement issued every two or three years. The commission is a permanent body. Correspondent, U. S. Consul-General Rublee, Vienna.

France.—Present issue, 1895; prepared by a commission, which was appointed by the government, and is composed of 6 professors of medicine, 5 members of the Faculty of Medicine, 6 professors of pharmacy and the 4 officers (president, secretary, etc.). Revision was begun in 1881 and finished in 1895; occasional supplements have been issued. Correspondent, U. S. Consul-General Mason, Paris.

Germany.—Present issue, Jan. 1, 1900; prepared by a commission, which was appointed by the government, and is composed of 14 physicians and 13 pharmacists. Revision was begun in 1898 and finished in 1899. The pharmacopeia is revised every ten years and no supplements are issued. The commission is a permanent body. Correspondent, Prof. E. Schmidt, Marburg.

Great Britain.—Present issue in 1898; prepared by the General Council of Medical Education and Registration of the United Kingdom, which is composed entirely of physicians, who, however, asked aid of an advisory committee of pharmacists, appointing the pharmaceutical chemist, Professor Attfield, as editor of the work. There are no regular periods of revision. The first edition was issued in 1867, the second edition in 1885, and the third edition in 1898. Supplements to the first edition were issued in 1876; to the second edition in 1890. Correspondent, Prof. F. B. Power, London.

Italy.—Present issue May, 1892; prepared by the Superior Board of Health, which was appointed by the government. The commission is composed of the following ex-officio members: The director-general of Health Office, the king's attorney, the medical inspector of the army, the medical inspector of the navy, the director-general of agriculture and chief veterinary of the army, together with 21 active members appointed by the government, mostly physicians, professors of chemistry, professors of pharmacy, etc. Supplements are issued when needed and made effective by royal decree. Correspondent, U. S. Consul-General de Castro, Rome.

Japan.—Present issue, 1906; prepared by a committee, which was appointed by the government, and composed of 7 physicians and 10 pharmacists. Revision was begun March, 1900, and finished March, 1906. The pharmacopeia has been revised three times since 1886. The present committee is permanent and supplements are issued. Correspondent, Dr. Tokichi Takamine, New York.

Russia.—Present issue, 1902; prepared by the Medical Council of the Ministry of Interior, which is composed of 40 members, mostly physicians, but also including 3 chemists, 1 professor of pharmacy, 2 veterinary surgeons, 2 deputies of the St. Petersburg Pharmaceutical Society, 1 engineer and 3 attorneys. There are no regular periods of revision. The fourth edition was issued in 1891; the fifth edition is the present; a new edition is now being prepared. Apparently, no supplements are issued. Correspondent, Straatsrath Johannes von Martenson, St. Petersburg.

Spain.—Present issue, 1905; prepared by a commission, which was appointed by the Royal Academy of Medicine, and is composed of 3 physicians and 4 pharmacists. Revision was begun in 1903 and finished in 1905. There is no regular period of revision and there are no yearly supplements. The commission is a permanent body. Correspondent, U. S. Consul R. M. Bartleman, Madrid.

Switzerland.—Present issue, March 1, 1908; prepared by a commission, which was appointed by the Swiss Bundesrath (the highest governmental organization), and is composed of 19 consulting members (18 physicians and 1 veterinarian) and 30 working members (1 professor of chemistry, 2 professors of pharmacognosy, 2 professors of pharmaceutical chemistry, 1 representative of the chemical industry, 1 food chemist, and the rest pharmacists). Revision was begun March 17, 1902, and finished March 6, 1907. The pharmacopeia is revised irregularly. The first edition was issued in 1865; the second in 1872; the third in 1893; the fourth edition is the present one. No supplements are issued and there is no permanent commission. Correspondent, Prof. A. Tschirch, Bern.

SUMMARY

Appointment of Revisers.—In all the countries cited above, the government has direct or indirect control; this is in marked contrast to the democratic method of selecting revisers in this country.

Personnel of Revision Committee.—The number of revisers ranges from 5 in Austria to 49 in Switzerland, while the ratio of physicians to pharmacists varies from a board of all physicians in Great Britain and Austria to a proportion of 10 pharmacists to 7 physicians in Japan.

Time Required for Revision.—The last German Pharmacopeia was revised in one year, while the last French Codex took over ten years. Switzerland and Japan took five years for revision, even as did the committee which revised our present Pharmacopeia.

Frequency of Revision.—The periods intervening between revisions are mostly irregular. No pharmacopeias have been revised more frequently than once a decade, the period prevailing in this country.

Supplements.—These have been issued in Austria, France, Great Britain, Italy and Japan. The other pharmacopeias, like that of this country, are not supplemented.

CONCLUSIONS

To draw from the foregoing data conclusions that will be of service in revising our own Pharmacopeia is a matter of some difficulty, as the conditions existing in other countries differ so markedly from those of our own land.

The method of selection of the revision committee that obtains in this country is completely in accord with the spirit of our democratic form of government, and it would be unfortunate, indeed, to replace our present Pharmacopeial Convention, with its delegates from medical and pharmaceutical societies, and the Committee on Revision which said convention elects, by a commission appointed by the government, like those which prepare the foreign pharmacopeias.

While a small number, for instance, seven members as in Spain, would seem to give a more compact, more workable body, it is significant that two of the best pharmacopeias of the world — those of Germany and Switzerland—were prepared by commissions larger than our last Committee on Revision. That a goodly proportion of the revisers should be pharmacists, since a large amount of revision consists merely of pharmaceutical and chemical details, will be admitted even by physicians; but whether the medical representation should be as scanty as prevailed in our last Committee on Revision is debatable.

As to frequency of revision, it is noticed that in those countries where the revision committee is a permanent body, the work of revision, as might be expected, was accomplished in less time than in our country, where each revision is taken up by a new organization, not necessarily containing a majority of the members of the previous committee. The fact that the last German Pharmacopeia was revised in one year is the best possible argument for a permanent committee. Moreover, the permanent existence of the committee would permit the publication of yearly supplements, a step that, in these days, is highly advisable.

In conclusion I desire to express my warm thanks to the correspondents mentioned above who so generously afforded me the information necessary to prepare the data from which this paper is prepared.

THE DIAGNOSIS OF INTESTINAL PERFORATION IN TYPHOID FEVER

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Without doubt the greatest bugbear to physician and surgeon alike in the management of typhoid fever is the ever-present liability of intestinal perforation.

This complication occurs in from 2.5 to 3 per cent. of all cases of typhoid. Furthermore, according to Osler, one-third of all the deaths in typhoid are due to intestinal perforation; and when we come to consider that, from statistics collected by Taylor, in the United States alone there are estimated to be 500,000 cases of typhoid annually, with 75,000 deaths, we are confronted by the astounding fact that about 25,000 persons die annually from intestinal perforation due to typhoid fever. It therefore seems that anything which may add to the knowledge of this condition is acceptable.

Twenty-four years ago Leyden advocated the surgical treatment of typhoid perforation and Mikulicz performed the first successful operation for the condition, and for the first time a ray of hope appeared in a condition which up to that time had appeared practically hopeless. But, in spite of the fact that the operative treatment is now and has been well known for some years, Harte and Ashurst were able to collect only 362 published reports of operations up to January, 1903. These cases gave a mortality of 74.3 per cent., thus showing that something had been done toward checking the death rate. At the Atlantic City session of the American Medical Association in June, 1907, J. E. Allaben reported 162 operations as all that he could find reported from January, 1903, to January, 1907, and these gave a mortality of 62.34 per cent., a decrease of 11.69 per cent., evidently due to improved surgical technic and earlier diagnosis. Doubtless many cases have not been reported; but when we consider that in twenty-three years only 524 cases have been reported, we can not deny that many cases among the thousands that have occurred must have gone unrecognized and that consequently the point in which we are lacking most is diagnosis, and more than that the early diagnosis, for it is an easy and simple matter to make a diagnosis of the peritonitis following a perforation, but it is far more difficult and by no means easy to make a diagnosis of the perforation itself.

TWO NEW SIGNS OF PERFORATION IN TYPHOID

It has been my privilege to follow seven cases of typhoid perforation. While following and studying these cases I observed two signs which seem to me to be important in the early diagnosis of perforation and to which, so far as I know, attention has not been called.

The first sign, for want of a better description, I have designated as the "dipping crackle" and is exemplified by the following case:

Case 1.—*History.*—A. L., female, aged 30, came under observation on the twentieth day of her disease. The onset and course of the disease had been typical but severe, and for three days before coming under observation she had had wild delirium, which had almost disappeared at the time I first saw her. On the evening of the twenty-first day of the disease she complained of a sudden severe knife-like pain in the right iliac fossa which was made worse by coughing. Her pulse became rapid, finally reaching 130 and changed in character, becoming smaller and showing increased tension to the finger. Respirations became rapid and labored but diaphragmatic respiration was maintained. The abdomen was distended, the area of liver dulness was gradually replaced by abdominal tympany and the heart became pushed to the left. The temperature gradually rose and about four hours after the onset of the symptoms she had a chill lasting ten minutes, and following this the temperature suddenly rose to 106 F. There was no change in the leucocyte count. There was well-marked tenderness and rigidity in the lower half of the abdomen and especially in the right iliac fossa. There were no signs in the lungs except a little more dulness in the right axilla and at the right base. There was no vomiting or restlessness.

The "Dipping Crackle" Sign.—At the first examination, which took place a few minutes after the perforation, on placing the bell of the stethoscope over the right iliac fossa and dipping suddenly with it as in dipping palpation, a very fine crackle was heard which sounded much like a fine crepitant râle, or as if two sticky surfaces were being drawn apart. This sign was present in three of the seven cases and appears to me to be a rather valuable confirmatory sign, as it seems to be due to the fact that in dipping suddenly the parietal and visceral layers of the peritoneum come in contact for an instant and, apparently, the inflamed surfaces stick together for a moment and then pull apart. I have never found the sign present over an area of more than two inches in diameter and never later than four hours after the initial symptom, presumably because the accumulated gas prevents the surfaces from coming in contact.

The second sign to which I desire to call attention is shown in the following case:

Case 2.—*History.*—W. C., male, aged 17, was taken ill suddenly and had been in bed only two days when he came under observation. The initial attack lasted only thirteen days, and during this he had an enlarged spleen, rose spots, and typhoid tongue, but no Widal reaction. After being normal for twenty days the temperature rose suddenly and he entered on a relapse. The spleen again became palpable and rose spots appeared but the Widal reaction did not become positive until the eighteenth day of the relapse. In the meantime two blood cultures had been taken and were negative. On the fifteenth day of the relapse he had a small hemorrhage and following this his fever remained fairly typical of the disease but rather long drawn out, until finally on the thirty-fourth day of the relapse he suddenly complained of a sharp, excruciating pain in the end of the penis on micturition. There was no change in temperature, respiration or leucocytes.

Second Sign of Perforation.—The patient was examined immediately and a small area of tenderness found low down in the right iliac fossa. He was turned on his left side and in half an hour the area of tenderness had moved toward that side about two inches.

Operation.—He was immediately prepared for operation, but owing to the fact that permission could not be obtained until his parents could be consulted, operation was delayed for four hours. The temperature meanwhile had been taken hourly, and it was not till five hours after perforation that it showed any change and then there was an abrupt rise to 105.4 from 101 F., with a corresponding rise in pulse to 118 from 86 and in respiration to 28 from 20. There was no vomiting, no loss of liver dulness, nor was there dulness in the flanks. He was operated on, the perforation found and sutured, and he eventually recovered.

The sign to which I desire to call attention, and the one in this case which practically clinched the diagnosis, was the fact that when the patient was turned over on his left side the pain and tenderness, so to speak, followed the turn and that fairly rapidly. Since seeing this case it seems to me that on the occurrence of a sudden pain in a case of typhoid the patient should immediately be turned on the side opposite the pain, and if the pain and tenderness follow the turn in from fifteen minutes to half an hour the diagnosis may be considered confirmed.

The explanation of the sign is simple. At the time of perforation there is a greater or lesser amount of the contents of the intestine extruded into the peritoneal cavity, and this extravasation tends to flow in the direction of least resistance, that is, downward, and its extension is marked by the indications of local peritonitis, pain, tenderness and rigidity. By turning the patient over on the unaffected side that side is made the lowermost, and if there be a perforation with extravasation the signs of the extension of the local peritonitis will pass to that side which is lowermost.

THE SIGNS AND SYMPTOMS OF PERFORATION IN GENERAL

In looking over the series of seven patients whom I attended I find that all the cases were rather peculiar. Two were practically ambulatory cases, two occurred in long drawn-out relapses, one—a severe case—was complicated by tertian malaria, and one was unusually severe and complicated by mental symptoms throughout. Of the seven patients four were women and three men; usually this proportion is reversed.

Two of the patients had had hemorrhages before perforation. In only one had there been any marked distention of the abdomen.

Perforation occurs as a rule at some time between the end of the second week and the fourth week of the disease and is more apt to occur in ambulatory cases or in cases with distention or hemorrhage.

Of all the symptoms, pain is the most marked and important one. This as a rule is sudden in its onset, sharp and severe and of a cutting or boring character. At first the pain is localized and later spreads, and this method of its spreading according to the position in which the patient lies I wish to emphasize, as it seems to me to be about the most pathognomonic symptom of typhoid perforation that we possess.

Pain may be present in other conditions in typhoid, notably in thrombosis of the iliac or femoral vein, but the differentiation is not difficult, as both the character and localization of the pain are different. The pain in the right iliac fossa occurring early in the disease may be mistaken for appendicitis, but usually occurs too early in the disease to be mistaken for perforation.

Pain may be absent, but only in those cases in which the sensorium is so blunted by the disease that the patient does not complain of it. One such case occurred in my series and in this case the diagnosis was made by the restlessness of the patient. I believe thoroughly that in all other cases pain is the one early, definite and constant symptom.

Tenderness usually follows or accompanies the pain, and in somnolent and delirious patients may be present when pain is not complained of. After a movement of the bowels (as in two cases in my series) the pain and tenderness may disappear, and this must be borne in mind or it may prove misleading. Even if they disappear it will only be for a short time and then there will be a recurrence.

Rigidity, if following or accompanying a sudden pain in the abdomen during the third or fourth week of typhoid, completes the chain of symptoms and to my mind makes the diagnosis positive. That it may not always be present was shown by one case in my series in which operation was delayed because of the lack of this sign, consequently I differ from Harte, who states that rigidity is never wanting except in patients with unusually large and pendulous abdomens.

The other signs and symptoms usually cited—chill, nausea, vomiting, rise of temperature and pulse, loss of liver dulness, shifting dulness and loss of abdominal respiration — are to be taken simply as confirmatory symptoms which may or may not be present. The "dipping crackle," as I have called it, seems to me to be a valuable confirmatory sign if present. All these symptoms should be considered as due more to the peritonitis following the perforation than to the perforation itself, and should on no account be waited for in order to establish the diagnosis.

I believe that the increase in leucocytes is absolutely valueless except as a confirmatory sign. It is so often absent until hours and, in some cases, days after the perforation. As Cushing states, "an individual observation at such a critical time may be misleading: in the first place, a condition of hypoleucocytosis is often characteristic of the fever, and a count apparently within the normal limits of 8,000 to 10,000 may actually represent a double increase in the number, and secondly, because by a single count the 'transient wave of leucocytosis' may entirely escape notice." In my series of cases in which the leucocyte count was followed closely throughout the disease, being taken every one or two days as a routine, it proved of little or no value as a diagnostic aid. Consequently I believe that, in private practice, the leucocyte count, except as a matter of scientific interest, can well be dispensed with and on no account should operation be delayed in order to wait for the result of a count.

There is one sign concerning which much has been written of late that I am sorry was not observed in all the cases in my series, and that is the variation in blood pressure. It has been stated that a transitory rise of from 20 to 30 mm. of mercury occurs immediately after the perforation. In my series, although the sphygmomanometer was not used, there was in several patients a change in the tension of the pulse which was perceptible to the examining finger, the pulse becoming distinctly smaller and more wiry. In one case that I observed the sphygmomanometer was used and showed a rise from 96 mm. of mercury to 132 mm., the reading being taken with the Janeway instrument. A diagnosis of perforation was made and the patient operated on, but it proved to be a case in the pre-perforative stage.

TREATMENT

There is only one treatment; that is operation, and that immediate. I have reported two patients operated on in whom perforation, although suspected, was not found. In neither of the cases did operation in any way militate against the patient's chance of recovery; it rather seemed to be beneficial, for in one case it caused the temperature to fall to normal in addition to relieving the pain, and in the other it relieved the pain. After seeing these two cases I should unhesitatingly recommend operation even if the diagnosis were supported only by a strong suspicion.

CONCLUSION

1. Perforation occurs as a rule in the latter part of the second, in the third, or in the fourth week of typhoid, especially in ambulant or atypical cases.

2. The initial symptoms are sudden severe lancinating pain in the lower part of the abdomen and generally in the right iliac fossa, and usually tenderness, there may or may not be rigidity. The other symptoms usually described are merely confirmatory if present, and

the majority of them are due to the peritonitis following the perforation and not to the perforation itself.

3. Two signs, hitherto undescribed, appear to me to be valuable as confirmatory evidence, namely, the one that I have designated as the dipping crackle, and the tendency of the pain and tenderness to approach the side that is lowermost if the patient be turned on the side.

4. In the management of a case of typhoid the attending physician should uncover the abdomen at least once a day and carefully and thoroughly examine it. In the light of recent work, blood pressure should be taken daily if possible. Nurses should be impressed with the extreme importance of pain in this disease.

5. On the occurrence of a severe sharp pain in the lower part of the abdomen, and especially in the right iliac fossa, accompanied by tenderness, with or without rigidity, the abdomen should be carefully examined and the limits of the tenderness mapped out. The patient should then be turned on the unaffected side, and if in from fifteen minutes to half an hour the tenderness has moved one or two inches, or if at any time the tenderness and rigidity become marked, immediate operation is indicated.

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Clinical Notes

APPARATUS FOR ADMINISTERING NITROUS OXID AND OXYGEN OR ETHER VAPOR AND AIR IN ANY DEFINITE MIXTURE

THE EXACT PERCENTAGES OF THE TWO GASES BEING UNDER THE IMMEDIATE CONTROL OF THE ANESTHETIST *

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Hewitt, in the latest edition of his treatise on anesthetics published in 1907, says: "There is no form of anesthesia at present known which is so devoid of danger as that which results from nitrous oxid when administered with a sufficient percentage of oxygen to prevent all asphyxial complications." He came to this conclusion after employing this anesthesia himself 17,000 times without having cause for anxiety in more than two or three cases, "in which, owing to the percentage of oxygen having been insufficient, transient respiratory embarrassment arose, and in one case in which transient syncope, probably of reflex origin, took place." In the same chapter he also says: "The chief objection to the use of definite mixtures of nitrous oxid and oxygen are: (1) that they are difficult to prepare accurately and in sufficient quantities; (2) that different subjects require different percentages, and (3) that the proportion of oxygen can not be increased or decreased to meet the special conditions arising during the administration."

It was this statement which stimulated me to devise an apparatus which will not only provide a sufficient quantity of these gases for a reasonably long anesthesia, but which will also deliver the gases in any desired definite mixture, the percentages of which will at all times be conveniently under the control of the anesthetist.

Hewitt and others have endeavored to accomplish this by employing two rubber bags as reservoirs for the two gases and securing a mixture of the gases by a regulating stop-cock at the outlets of the two bags. The objection to this method is that the two rubber bags must be kept approximately under the same tension of gas, and hence inflated to the same degree; otherwise the gases do not mix accurately.

In place of two rubber bags I employ a pair of small gasometers exactly alike in all dimensions. The gases are conducted from these two gasometers by two flexible tubes of equal dimensions, to the mask, in which there is a regulating stop-cock which delivers the two gases accurately mixed in any required proportion into the mask. The accuracy of this regulating device may be tested by noting the relative amount of fall of the two tanks during a given time. The apparatus shown in Figure 1 is adapted not only for administering nitrous oxid and oxygen in definite mixtures, but also for administering ether vapor and air in definite percentages.

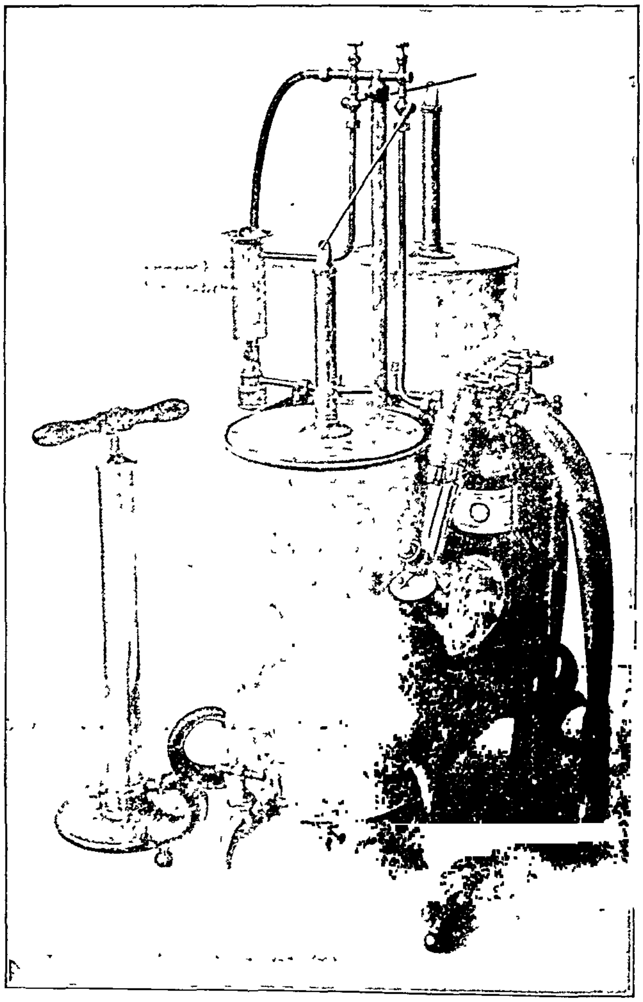

Fig 1.—Apparatus for administering nitrous oxid and ether or ether and air in definite percentages.

The two anesthetics may at any time be conveniently changed, the one for the other, without an interruption in the anesthesia. A very convenient procedure, which is also agreeable to the patient, is to start with pure nitrous oxid under which the patient loses consciousness within thirty seconds on the average. As soon as cyanosis makes its appearance a small percentage of oxygen,

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* Read before the American Academy of Ophthalmology and Oto-Laryngology, Cleveland, Aug. 27-29, 1908.

2 or 3 per cent., is allowed to mix with the nitrous oxid, and as the anesthesia progresses the oxygen may be increased to 6 or 8 per cent. or sufficient to prevent cyanosis or asphyxia. When the patient is profoundly under the anesthetic the nitrous oxid may be replaced by ether vapor and the oxygen by air. In all these changes the relative percentage of the two gases being used are under the immediate control of the anesthetist, who has merely to change the pointer on the face-mask which indicates the percentage of the two gases.

The water in which the two gas-tanks float is preferably made warm. This warms and moistens the anesthetic vapors prior to their inhalation, which is a great advantage in the administration of ether to prevent the bronchial catarrh and pneumonia which too often follow the administration of this agent by the drop method. The continuous evaporation of the ether has a chilling effect on the vapor, and this can be overcome only by warming the ether vapor rather than the ether fluid. I fill a gasometer with water at 130 F. and this remains sufficiently warm for some hours afterward.

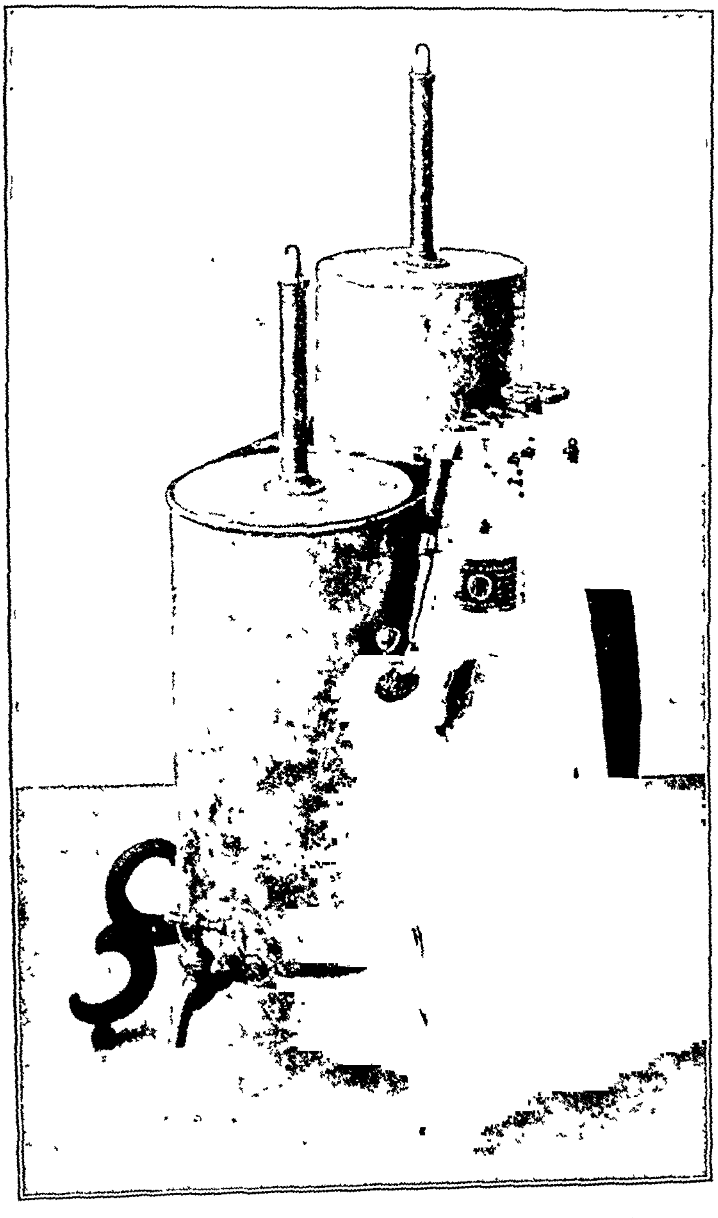

Fig. 2.—Apparatus for administering nitrous oxid and oxygen in definite proportions.

In administering ether, compressed air is used to vaporize the ether for one gasometer and to keep the other gasometer filled with air. The compressed air may be supplied from any of the usual sources. Its entrance to the gas tanks is regulated automatically and it is allowed to enter in sufficient quantities to keep both gasometers filled. The automatic check-valves are regulated by the rise and fall of the gasometers.

A simpler apparatus, Figure 2, has been made without the ether attachment which is used for administering nitrous oxid and oxygen. No compressed air is required for this.

The advantages claimed for the apparatus are the following:

1. It delivers the two gases into the mask with absolute uniformity of pressure and mixed in definite percentages. The accuracy of these percentages can be accurately tested at all times by shutting off the air supply and noting the relative fall in the two gas tanks during a given time.

2. The relative proportion of the two gases is conveniently under the control of the anesthetist, the regulating device being on the mask. The proportion of the two gases can be instantly changed to meet the requirements of the patient.

3. In administering ether, the apparatus requires no attention except the introduction of a fresh supply of ether once in an hour or so. This may be done while the anesthesia is progressing, as the ether botttle can be cut off from communication with the gas tanks by a valve. There is sufficient gas in the tanks to continue the anesthesia until the connection with the ether bottle is restored.

4. Perhaps the greatest advantage of this apparatus over all other forms of anesthetic apparatus which mix gas definitely is the use of warm water in the gasometer tanks, which warms and moistens the gases. This prepares the gases much better for reception by the bronchial tubes. Respiratory spasm is less likely to be excited and the bronchial complications which often follow ether administration are reduced to a minimum.

The new thing in this apparatus is the use of two gasometers with a mixing valve in the mask.

ACCIDENTAL LABORATORY INFECTION WITH DIPHTHERIA BACILLUS

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History.—On December 2 I received at the laboratory a very thin homeopathic vial containing a suspected diphtheritic membrane for examination. In attempting to remove the cork the vial was broken and a piece of glass was driven into my left index finger. The wound was allowed to bleed freely for several minutes, then carefully cleansed with a 10 per cent. solution of formalin and closed with celloidin. The wound in the finger showed no sign of infection before the morning of the second day, when a grayish yellow border was observed around the margin. The wound was opened and found to contain several drops of thick grayish brown fluid, which on microscopic examination was found to consist largely of polymorphonuclear leucocytes and some blood. Numerous *B. diphtheriæ* were present, all of which were found inside the leucocytes, there being from two to five such leucocytes to the field, each containing from ten to twenty bacilli.

Treatment.—The wound was again cleansed with 10 per cent. formalin, sealed with celloidin and 1000 units of diphtheria antitoxin were injected into the forearm. Smears and cultures from the wound taken on the following day were sterile and healing occurred in the usual time without further complications.

The membrane submitted was from the pharynx of a child and had been taken on the fourth day of the disease. Smear preparations from the membrane showed *B. diphtheriæ* in almost pure culture. The organisms were of the barred type, very large, with marked tendency to club formation. Cultures from this membrane on Loeffler serum at 35 degrees C., examined after seven hours, gave the solid type, and after twenty-four hours the usual granular organisms. The direct smears from the infected finger showed small organisms of the solid type. Cultures from the infected finger at 35 degrees C. gave the solid type after seven hours, and after twenty-four hours the usual granular organisms, exactly as did the original membrane. This illustrated beautifully the possibility of morphologic variations in the same strain of organisms when infecting individuals under different conditions.

INSTRUMENT FOR APPROXIMATION OF THE PALATINE PROCESSES IN CASES OF CONGENITAL CLEFT PALATE

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PHILADELPHIA

The method advocated by Brophy for bringing the palatine processes in apposition as a preliminary to operative procedure for uniting the soft parts, and so successfully employed by him, has not in my hands been so satisfactory. Even when successful it is so at the expense of a great amount of mutilation of the parts and suffering of the individual. The one other method that has been more generally employed with instances of satisfactory results is that of having the mother encourage the inward growth of the cheeks and, consequently, the palatine processes by firmly compressing the cheeks on either side with the two hands at the same time. This method, of course, can only be successfully employed before ossification has caused fixation.

My repeated failures, therefore, with most of the devices heretofore employed in retaining the palatine processes in position have incited me to devise the comparatively simple instrument shown in the illustration. It is most efficient in all cases in which there is enough of the palatine processes present to be brought together. This can be done at once when the subject is under 5 or 6 months of age. After this period it can be efficiently done by continuously increasing pressure, which should be continued over a period of four or six weeks.

The instrument consists of two lateral plates, semi-oval, so as to conform to the shape of the lateral halves of the superior maxillary bone, fastened together in front by a hinge in order to prevent any play of the lateral half while being introduced. They are brought together by a central right and left screw which is so arranged as to bring together or separate the two lateral plates simultaneously. Sufficient force can be employed by this screw to bring together the palatine processes in any case in which ossification is not a factor; and in cases in which ossification has advanced so far as to prevent immediate approximation, an increased pressure kept up by tightening on the screw will in a short while secure the same result. The fingers alone may be used to tighten the screw, or when the instrument is in position the key which accompanies it can be best employed for this purpose. The two teeth, which are set posteriorly along the inner and upper edge of each lateral plate, are of two-fold value: first, in holding the plates in position by their fixedness in the bony alveolus, and, second, in lessening the injury to the spongy alveolar tissue throughout its entire surface over which the lateral plates are applied. They therefore lessen the general pressure of the entire plate; consequently, what injury the spongy alveolar processes suffer will be mostly at the points where these teeth are fastened.

There is no reason to believe there is any great amount of suffering caused by its use, as its employment, beginning in children as young as 2 days, has not lessened either their general nutrition or development.

1222 Spruce Street.

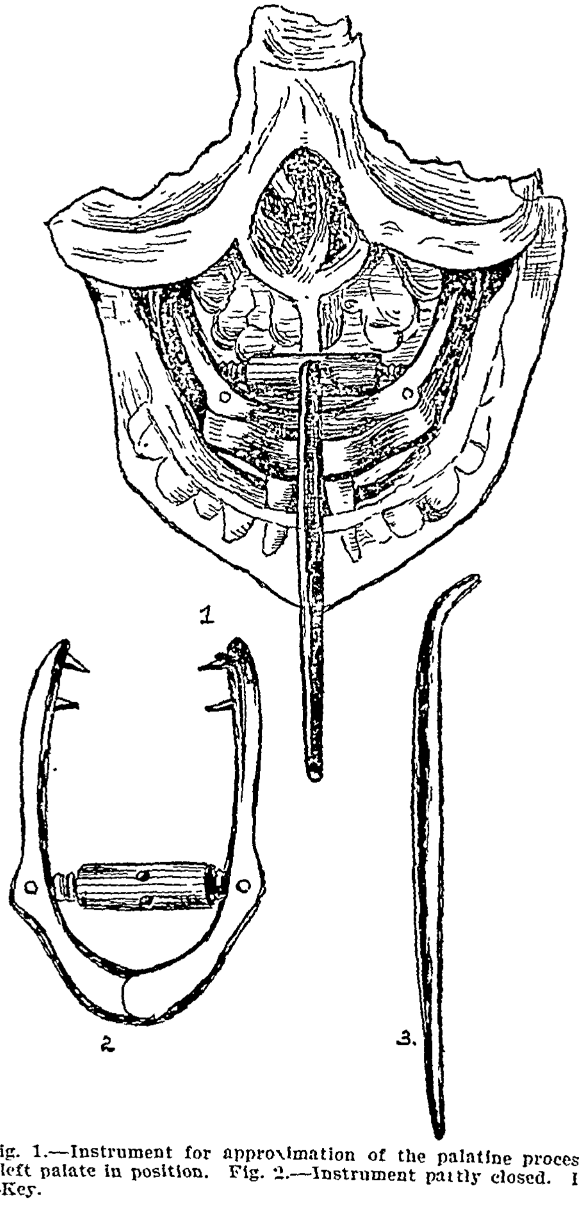

Fig. 1.—Instrument for approximation of the palatine processes in cleft palate in position. Fig. 2.—Instrument partly closed. Fig. 3.—Key.

Specific-Gravity Test for Identification of Criminals.—Debenedetti suggests that important information might be obtained from the individual displacement of water, the special specific gravity, as a means of identifying criminals. He publishes an illustrated communication on the subject in the *Semana Medica*, of Buenos Aires, Dec. 31, 1908, p. 1781. Even if the specific gravity of the arm or leg or head were tested alone, possibly sufficient information might be obtained. The water must be always at the same temperature, for which he suggests 37 C. (98 F.), adding that a little salt in the water brings the specific gravity to that of distilled water at 4 C. He calls the method "hydrostatic anthropometry;" it is not necessary for ordinary criminals, he remarks, but cases may arise in which further means of identification may be useful.

AN UNUSUAL CONGENITAL DEFORMITY

ABSENCE OF BOTH FEMORAL HEADS AND NECKS

JOHN RIDLON, M.D.
CHICAGO

An eminent general surgeon referred a child to me, Nov. 5, 1908, for operation for congenital dislocation of both hips. The patient had been referred to him by an ex-interne of Cook County Hospital practicing in a distant state.

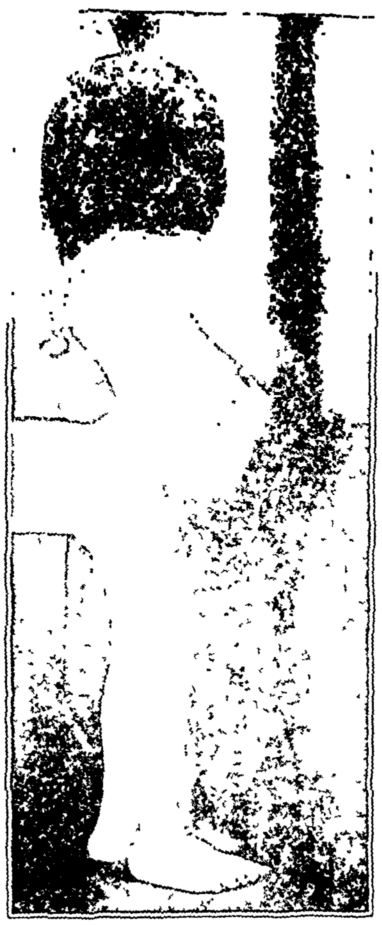

Fig. 1.—Profile view of patient in whom both femoral heads and necks were absent. This is the typical attitude of severe double congenital dislocation of the hips.

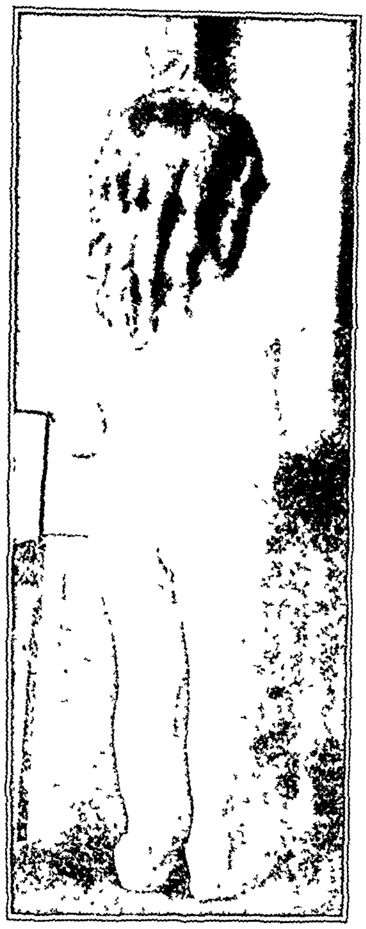

Fig. 2.—Rear view of patient, showing rachitic ankles and knees, as well as the prominent hips characteristic of double congenital dislocation hips.

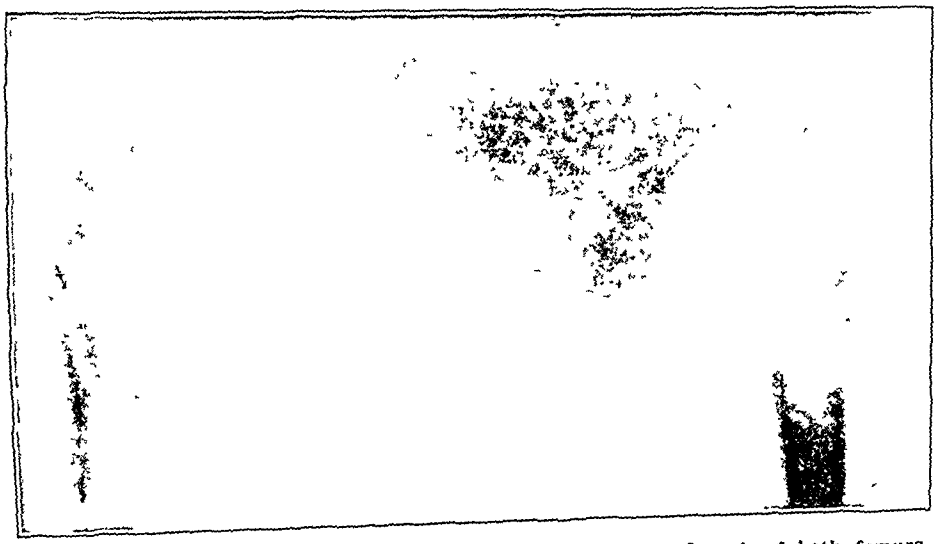

Fig. 3.—Radiograph showing congenital absence of head and neck of both femurs.

The patient was a female child, aged 7½ years. Her attitude in standing and walking was typical of bilateral congenital dislocation of the hips (Figs. 1 and 2). The hips were prominent; the greater trochanters showed with unusual distinctness; there was marked lordosis of the lumbar spine; the child waddled when she walked; the adduction of the legs was limited; the lordosis could be corrected by flexing both thighs to 50 degrees or one thigh to 90 degrees.

The child had rachitic enlargement of the bone ends at the wrists, ankles and knees, and there was a moderate degree of knock-knee. She had pigeon-breast and flaring lower ribs, and the head and face were of rachitic type.

Six weeks before this child (her sixth) was born, the mother had had a severe attack of influenza, followed by a "sore back," and inability to stand straight. The child was nursed for the usual period, had first teeth at the usual time, and walked at fifteen months.

A careful manual examination failed to reveal a femoral head on either side; and because of the rachitic evidences present I believed the case to be one of extreme rachitic bilateral coxa vara. To establish this diagnosis I had an *x*-ray picture made; this showed (Fig. 3) not a coxa vara but a complete absence of the head and neck of the femur on both sides.

GUMMA OF THE PITUITARY BODY

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Surgeon, U. S. Public Health and Marine-Hospital Service
WASHINGTON, D. C.

Patient.—P. M., an Irishman, aged 37, single, entered hospital in 1908, in an unconscious condition, with a history of having had an apoplectiform attack. It was reported by his friends that he had had syphilis.

Examination.—The patient was a well-developed man with sandy hair and beard, apparently 50 years old. There was ptosis of the left upper eyelid. His face was pale; his lips very pale. There were sordes on the teeth and lips; the tongue was moist, swollen and coated. The pupils reacted to light. The thorax was deep and well muscled. There were a few diffuse, moist, large and small râles. The abdomen was apparently normal. The skin was cold and moist. The patellar reflexes, when first examined by an interne, were reported as normal or slightly increased, but were not elicited at any subsequent examination. The pulse was 80, weak and of low tension; the respiration 22; and the temperature 36.8 C. It was not possible to get an area of absolute dulness in the cardiac region with the patient in a recumbent posture. The apex beat was not seen. The heart sounds were pure and distinct, but weak. The urine showed a trace of albumin and hyaline casts.

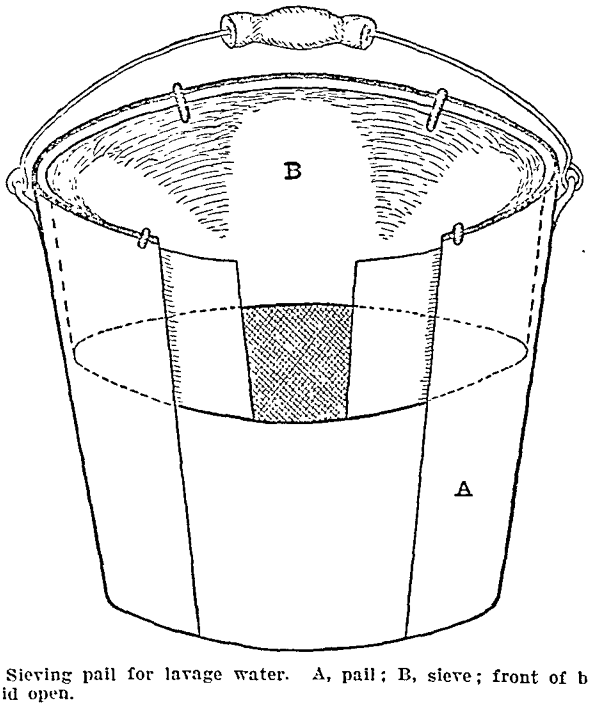
Course of Disease.—Strychnin sulphate was ordered to be given hypodermically. On the second day, ophthalmoscopic examination showed papillitis of the left optic nerve. It was not possible to see the right nerve-head, as the right eye continually followed the reflection of the light; but there was a rather pale appearance of the retina. The nurse reported involuntary evacuation of the bladder and bowels. There was a small hyperemic area on the inner aspect of the left ankle, as of incipient decubitus. The strychnin was continued; potassium iodid was ordered, 30 grains, three times a day, increasing 5 grains daily, and inunctions of mercury were instituted, to be used daily. The patient was able to swallow in the forenoon, and soft diet was ordered. On the third day, the patient was found to be very weak; his temperature was 38.4 C.; his pulse could barely be felt at the wrist. There was a slight cough and relative dulness of the right lower lobe. Treatment was continued as before, with the addition of continuous irrigation of the colon with hot normal salt solution. On the fourth day, the pulse was 104, the respiration 28, and the temperature 36.6 (fall by crisis). The irrigation was discontinued. The patient spoke for the first time, and protruded his tongue when told to do so, leaving it out indefinitely unless told to put it back in his mouth. There seemed to be an aphasia present, particularly for proper names. The patient was disoriented and had a condition of pseudoparalysis. He could apparently make any movement, but made very few. The muscles were firm and moderately well developed. There was no sign of any focal lesion, except ptosis of the right upper lid and papillitis. The patient continued in the same condition until the night of the thirteenth day, when his temperature rose to 39.4, his breathing became rapid, and there was a slight cough. The patient died at 2 a. m. on the fourteenth day after his admission.

Autopsy.—The pathologic findings confirmed the clinical diagnosis of syphilis, gumma of the brain, chronic interstitial nephritis, nutmeg liver, general arteriosclerosis and pneumonia, and also showed the existence of cirrhosis of the liver. The skull was slightly adherent to the dura; the Pacchionian depressions were marked. There was considerable subarachnoidal fluid, especially about the base of the brain. There was a gumma about the size of a horse-chestnut just posterior to the optic commissure, lying in the sella turcica. The optic tracts posterior to the commissure were involved. There was no involvement of the fourth nerve trunks.

SIEVING PAIL FOR LAVAGE WATER

ANTHONY BASSLER, M.D.
NEW YORK CITY.

The object of this pail is to strain out from wash-water returning from the stomach, substances which would be of clinical value in the diagnosis and therapeutics of gastric disorders.



Sieving pail for lavage water. A, pail; B, sieve; front of both laid open.

The apparatus is simple, consisting merely of an ordinary enameled ware ten-liter pail, into which is fitted a straining-can which is made to set snugly into the upper part of the inside of the pail. The can is made of sheet brass, and above are four hooks to keep it in place. The floor of it consists of a brass wire mesh of sixty wires to the inch. This screen stretches across the pail at about one-third the distance down from the rim, and is of strong texture so that it will stand handling and wear without breakage. At the end of the washing, the straining sieve is taken out for examination, the clear water being left below in the pail.

Special Article

IMPRESSIONS OF PARIS *

WILLIAM OSLER, M.D.
Regius Professor of Medicine, Oxford University; Honorary Professor of Medicine, Johns Hopkins University
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I. TEACHERS AND STUDENTS

THE REVERENCE OF THE FRENCH FOR GREAT MEN—TOUSSAINT—THE MEDICAL SCHOOL—THE STUDENTS—THE CLINICS

PARIS, Jan. 15, 1909.

THE REVERENCE OF THE FRENCH FOR GREAT MEN

After a stay of three and a half months, I am leaving Paris with many regrets. I am sorry not to be a member of the Faculty of Medicine; I should be glad to put after my name *Médecin des Hôpitaux;* the position of *chef de clinique* at the Hôtel-Dieu with Professor Dieulafoy would suit me admirably; I could be quite happy as an interne with Professor Raymond at the Salpêtrière, or as an externe with Professor Pierre Marie at the Bicêtre or even as a *stagiaire* at the Cochin with Dr. Chauffard! Best of all, I should like to be a P.C.N. at the Jardin des Plantes, a student who is working at physics, chemistry and natural history in the year preliminary to medicine. I should like to do the *vice versa* trick of Anstey's story, and change places with the young P.C.N. in this year's class who will go through the grades of my regrets just mentioned and who about the year 1940 will become dean of this ancient and remarkable medical school.

It would be pleasant to see the superstructure which the next two generations will build on the scientific foundations of the nineteenth century—but these are fancies, not impressions, and it is the latter which I wish to give to my brethren on the other side of the Atlantic, impressions of a long-desired medical holiday among some of the older universities of Europe. Asked the strongest single impression made on me here, I should reply: "The extraordinary reverence of the French." The streets, the squares, the churches, the public buildings, the schools, all tell the same story; the books repeat it, the newspapers echo it, and with it the lecture rooms resound—reverence for the great men of the past. The Pantheon, with its inscription, *Aux Grandes Hommes La Patrie Reconnaissante*, is but a great expression in stone of this universal sentiment. The history of science is writ large in the city; in monuments, in buildings dedicated to the illustrious dead and in streets called by their names. There are more statues to medical men in Paris than in Great Britain and the United States put together; many of the hospitals are called after the men who have shed glory on France—Bichat, Laennec, Broussais, Trousseau and Claude Bernard—and in the hospitals themselves each ward is dedicated to the memory of some distinguished man. Every Frenchman is a hero worshiper, and has a master, dead or alive, whom he adores. Among the men of this generation you can tell very quickly who have been under Claude Bernard or Trousseau or Charcot or Potain. The lecture, the clinic, the casual conversation, is almost certain to bring in a reference to "my honored master"; and this delightful feature is seen in all circles. Even in the salon-catalogues, after the name of the painter of a picture is put the name of his master.

But to realize what the sentiment means to Frenchmen, one must be in Paris on All Saints Day—Toussaint—the fête of the eternal absent, which is kept in a way that appeals with extraordinary sympathy to the heart of one who believes in the immanence of the mighty dead "who live again in minds made better by their presence." During the last week of October the streets begin to tell of the great festival. In stalls along the boulevards, in temporary markets, in the ordinary flower-shops there is a rich display of decorations—crowns, crosses, stars in fresh flowers, or leaves, with which to decorate the graves. November 1 fell on a Sunday.

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* EDITOR'S NOTE:—This is the first of a series of travel notes by Prof. Osler, who is on a year's leave of absence from his duties at Oxford.

Though a stranger within the gates, I had a little pilgrimage of my own to make on Saturday afternoon to the cemetery of Montparnasse. The main avenue leading to it was an open flower-market, and for three or four hundred yards the cemetery wall was lined with booths for the sale of every sort of emblem and of fresh and dried flowers. Through the "Gates of Grief" a steady stream of people poured, each one bearing some tribute to the memory of a loved one. I stood for several minutes just inside, watching the procession. A group of young schoolgirls passed, each one bearing a bunch of chrysanthemums to lay on the tomb of a fellow pupil or of a loved teacher; close at hand were two Sisters of Mercy arranging wreaths on a vault that looked one of the oldest in the cemetery—perhaps the annual devotion of the guild to a loved member. A little laddie of eight hurried by with a bunch of violets in his hand, running with the ease of one who knew his road. A young mother in deep mourning with a baby in her arms, an aged couple arm in arm, each with a little basket of flowers, two young students, a little old lady with her daughter followed by a footman carrying large wreaths, workmen in rough clothes, soldiers, sailors—a motley group, a touching sight, but on the whole not a sad one. Here and there we could see the stricken heart in the pale set features, but the general impression was one of a cheerful festival, and the glorious sunshine, the bright flowers and the merry voices of the children helped to dispel the gloom of the city of the dead.

Then I turned and sought the tomb of a man whom my teachers taught me to honor. In Odessa a young Frenchman met with an experience which has happened to every thoughtful physician. An epidemic of diphtheria with its awful mortality struck the terror of helplessness and hopelessness into his heart, and he decided to return to Paris, again to take up the student life and to endeavor to know more of disease before he undertook its treatment. An old friend at the Charité Hospital gave him the opportunity he sought, and for years he worked quietly at the problems of disease. With the publication of his books on typhoid fever and on tuberculosis, Louis found himself famous, and he ranks to-day among the great French physicians who laid the foundation of modern clinical medicine.

My old teacher, Palmer Howard, a man of the same type, taught me to reverence his memory, but my pilgrimage had another inspiration—gratitude to the devoted teacher and friend of the veterans whom I loved in the profession in the United States—W. W. Gerhard, Oliver Wendell Holmes, Henry I. Bowditch, George C. Shattuck and Alfred Stillé. But as I laid my wreath in front of the grille of the tomb it was not of these men I thought, but of young James Jackson whom Louis loved as a son and who was stricken at the very outset of a brilliant career, and whose memoir by his father should be in all medical libraries, as the story of his life is an inspiration to young men. And to Louis himself came a similar tragedy. Inside the tomb is a slab of marble to the memory of his only son, a medical student who died of tuberculosis in his eighteenth year. At dinner one evening Dr. Bucquoy, President of the Academy of Medicine, who was Louis' last interne told me the story of the illness—a sudden hemoptysis and then a long lingering progress to the grave!

To the famous cemetery of Père Lachaise all Paris flocks on Toussaint and the following day. Hundreds of thousands visit the tombs of the great men who lie there, and the place is literally strewn with flowers. We went on both days, as it takes time to see the tombs and to find those of interest. Here I had a special mission, to see the tomb of that rare genius, Bichat, who started a revolution in medicine before he was 30, and who died at 32, leaving a name which is reverenced throughout the world. It was good to see that his simple grave was not neglected—a wreath, fresh flowers, and several plants showed that his memory was still cherished, and I added a bunch of pansies "for thoughts."

Toussaint gives an indication of the spirit which makes France great. Present in the daily life and everywhere in evidence it breaks out into this magnificent demonstration of loyalty to the family and of reverence to the *men* who have helped the nation and the race. To the cold-blooded Anglo-Saxon this festival of the dead is a revelation, which he can not witness without profound emotion and without a regret that England and America miss in great part the moral and intellectual inspiration associated with such celebrations. France sings one song: "Glory to Man in the highest! for Man is the Master of things," with which words Swinburne (who has been of all modern Englishmen the most sympathetic interpreter of the French) ends his famous "Hymn of Man."

In the medical world of Paris at a first glance the men only are recognizable; everything else is different, and so very different! But here is the charm; and it does one good to get into an atmosphere charged with novelty, where the burning questions are for a time unintelligible. There are four factors of the first importance—the medical school, the hospitals, the medical societies and the Pasteur Institute.

THE MEDICAL SCHOOL

There are thirty-seven professors and forty-three *agrégés* or assistant professors, to which must be added scores of assistants and demonstrators in the different laboratories. The faculty chooses its dean (at present Dr. Landouzy, the distinguished physician) and its own members, with the supervision of the Superior Council and the Minister of Education. It is not often, I believe, that the choice of the faculty is overridden. A man who reaches the dignity of a professorship in the faculty is pretty certain to have earned the distinction thoroughly, and the present occupants of the chairs are men widely known in their different branches. Much of the work is done by the *agrégés*, but in nearly all cases the professors themselves are very hard-working men. At the medical school are the dissecting-rooms and the laboratories, the equipment of which appears to be excellent. For a large school one can not but feel that the separate unit—the institute—is a more satisfactory plan.

There are no professional pathologists in France—the men in charge of the laboratories of pathology and general therapeutics (Bouchard) of pathologic anatomy (Pierre Marie) and comparative and experimental pathology (Roger) are physicians to the hospitals and engaged in practice. Cornil, who died recently, one of the most distinguished pathologists in Europe, was physician to the Hôtel-Dieu and a senator. Specialists are not recognized in the wide field of internal medicine. The professors of *pathologie médicale* (internal medicine), Déjerine and Brissaud, are two of the most distinguished of living neurologists. But a more remarkable illustration of the absence of a group of professional pathologists was in the appointment of Pierre Marie to be Cornil's successor. It would be very much as if Allan Star or Dana were selected as successor to Prudden. But in practice it does not work badly—not at least in Pierre Marie's case. He has the laboratory in excellent order, a staff of first-class assistants who are fully equipped for all the modern problems; and a young Edinburgh graduate who has been attending the laboratory demonstrations in morbid anatomy tells me that it is one of the most profitable courses he has ever followed.

An attempt to break this old system of filling the scientific chairs with hospital men has led to a pretty row—one of three which I have been following with great interest. When the anatomy chair fell vacant last year, it was thought of course that the usual plan would be followed; and among the local candidates a very well-known man, an assistant of the former professor and a surgeon to the hospital, expected the position. But a new departure was made. Professor Nicolas, a professional anatomist, was brought from Nancy, and he has rearranged the dissecting-room; in fact, has taken charge of it himself. The students raised a great row last year and the dissecting-rooms had to be closed. With the opening of the course in November, the troubles began again, and it was impossible for Professor Nicolas to lecture. The amphitheater was a mob of howling students, who would not listen to him. Day after day the disturbance continued, but toward the middle of December, just as matters had begun to settle, a second row began, of which I shall speak in a few moments, and this stirred up the first and second year students, and as a result of a final riot, the Minister of Education closed the school for students of these years until the first of March.

There has been a good deal of personal animus in this affair. Naturally, Professor Nicolas and his assistants have not been very acceptable to the many friends of the other candidates. Scarcity of material and new arrangements about the number of men dissecting on a body, have been among the grievances; but the total number of bodies handed over to the school is enormous—in 1907, 1,958 to the medical school proper and 724 to Clamart, a separate dissecting-room for the externes and internes. With the opening of the semester peace seems in sight, and the Minister of Education has forgiven the students and reopened the school.

The *agrégés* form a body of men analogous to the assistant or associate professors in American schools and to the privat-docents and professors extraordinary in Germany, only here they are paid officers of the school, help the professors in teaching and in the examinations, and from this body the professorate is recruited. Every young doctor in Paris, at some time of his life, hopes to become an *agrégé*. The positions are given after examination (*concours*) by a jury selected from the faculties of medicine of France. So many vacancies occur each year in all the schools. The appointment is for nine years.

This year a new regulation came into force and led to a revolt and then a riot. A preliminary examination was instituted to select those who were eligible to compete at the *concours*. As a kind of certificated examination this was opposed by the Congress of Practitioners as creating a sort of special diploma. But the chief opposition came from the candidates and their friends, as the subjects of examinations were to be of an elementary character—anatomy and physiology—so as to insure that all candidates kept up their knowledge of these branches. As most of the men applying for *agrégé* professorships are at least 35 years of age, and have long been engaged in special work, they not unnaturally raised a protest against an examination on subjects with which they had, so to speak, long since finished.

The examination was fixed for Monday, December 21. There were 148 candidates for ten or twelve places. The jury was composed of nine members, chosen from the different faculties of France under the presidency of Professor Bouchard, who is regarded as responsible, in great measure, for the new regulations. There were rumors of a great row, so I went early, armed with a note, which admitted me to the school. By noon the street outside was a surging crowd and only the candidates were admitted through the gate into the quadrangle; but a sudden rush carried the guards, and about two hundred and fifty got inside. About fifty policemen had been stationed in the quadrangle, and they endeavored to put out the students who had come in with the candidates. There were a good many scuffles and a few were roughly handled. Groups of the candidates protested against the invasion of the school by the police.

By 1 p. m. the tumult inside and out had become so serious that Professor Bouchard asked to have the Republican Guards (soldiers) called out, and they soon cleared the quadrangle. Meanwhile, Prof. Pierre Marie and one or two members of the jury had got the candidates into the hall, and at 1:30 the greater part of them filed into the small amphitheater. I bringing up the rear, regarded, I could see by glances of some of the men, as an ancient candidate from the University of *Weissnichtwo*. Inside the babel was more intense than ever; the men protested against the new arrangements as preposterous and declared they would have nothing to do with the *concours*. In a few minutes the members of the jury came in and took their places, greeted by jeers and shouts. Members of the guard were called in and lined the steps of the amphitheater, and this still further aggravated the row. The men refused to inscribe their names and the jury retired. The riot excited the entire university and the whole town, as the protest was not by students, but by men of advanced standing, many of them well-known by their researches and publications.

The next day the jury announced that the *concours* would be held on the 24th at 7:30 a. m. By 6 a. m. the police had possession of all the streets leading to the medical school, and only those were allowed to pass who had certificates. One hundred and thirty-eight candidates were present, of whom ninety-seven refused to take part. The questions, set for the written paper, were: (1) The intestinal mucosa and its functions; (2) the secretion and excretion of the bile; (3) the mammary gland and its functions. The men who abstained sent a respectful protest to the jury, saying that the questions were of a too general character for the men who had long since specialized in various directions, and that they also felt that the interference of the police and soldiers was an insult to the profession. As they remarked very properly, they were already men of experience, some of them had gray hairs, many had contributed to advance the science and art of medicine, others were physicians and surgeons to the hospitals, men with established positions in the community.

Meanwhile, outside the faculty buildings, the medical students had taken up the quarrel, and throughout the day a series of conflicts took place. A good many windows were broken, a few students were hurt, and the police had to stand a good deal of rough treatment. Fortunately, the Christmas vacation brought peace. The new regulation was again discussed by the faculty and the superior council, and as a result of the numerous protests the Minister of Education has announced its revocation.

A faculty without its troubles is always in a bad way—the waters should be stirred. Some ferment should be brewing; the young men should always be asking for improvements, to which the old men will object. It is a sign of health, and so we may regard these troubles at the Paris medical school—much good will come of them. Not that the problem of the appointment of professors will ever be solved. The *concours* seems an admirable plan for the *agrégé*, though it is much criticized, and many here are in favor of a less didactic test—of some plan whereby a man's work will tell. The difficulty would be to eliminate favoritism and to get a perfectly impartial jury. The positions are so few (only about ten this year), and the candidates so numerous.

There is growing up a feeling in favor of the German plan of privat-docents; of recognized extra-mural teachers as in Scotland, but the traditions are strongly for the *concours*, which they say, with all its defects, brings out the strong men and is an immense stimulus. Moreover, it is the continuation of a long series of *concours* through which the good men pass the various grades of externe, interne, *chef de clinique* and *chef de laboratoire*, and physician or surgeon to the hospitals. It would be difficult to give it up without wrecking the whole system which for a hundred years has been the distinctive feature of French medicine. It fosters, too, that precious quality of clear and logical expression in which our French brethren excel; for in the final examination at the *concours* the candidate in medicine has to hold a clinic and has to lecture for an hour on some subject after forty-eight hours of preparation. The man with a glib tongue has a great advantage, and yet as we all know he is not always the best man, and it would seem desirable in some way to recognize the scientific contribution of the candidates.

(*To be continued*)

Therapeutics

SPECIFIC URETHRITIS

Dr. James Pedersen, New York (*New York Medical Journal*, Jan. 23, 1909), discusses the treatment of acute gonococcic urethritis in the male. He emphasizes the well-acknowledged fact that there is no "best" treatment for this inflammation; in other words, there is no treatment that is the best for all patients.

While, theoretically, the most sensible treatment would be to place a patient with specific urethritis in bed, on a milk diet combined with bland alkaline drinks and free catharsis, it is obviously impossible, in the majority of instances, to carry out such treatment.

Consequently it should be aimed to get as near as possible to such general treatment; in other words, the patient, besides what medication he may receive, should be told to walk as little as possible, lie down as much as possible, eat a bland, non-irritating diet, which means abstaining absolutely from alcohol, tobacco, coffee, tea, fried stuffs, much meat, spiced foods or condiments. The patient should drink freely of water or alkaline water, as vichy. He should also wear a suspensory bandage, and should be instructed in the most perfect cleanliness by the physician.

The aim of medication should be, as stated by Pedersen:

1. To influence the volume and reaction of the urine.
2. To render the urine more or less antiseptic.
3. To charge the urine with a medicament in solution which shall act on the inflamed mucous membrane.

The first indication is met by the administration of alkalies to the amount of rendering the urine alkaline, or by the administration of sodium salicylate, salol (phenylis salicylas) or saccharin to render the urine acid, if that is desired.

To meet the second indication there are no better drugs than salol (phenylis salicylas) or hexamethylenamin (urotropin), although drugs that meet the third indication also have some antiseptic properties.

The drugs to meet the third indication are copaiba, santal wood and cubebs, and of the many balsams and genitourinary stimulants offered none are better than these drugs. The oil of santal is the best and fills every indication that any of the other balsams can fill, and with less irritation to the stomach or disturbance of digestion.

Whether the urine should be rendered alkaline or kept acid in gonorrhea is a subject of dispute, some authorities believing that alkalinity of the urine inhibits the growth of the gonococcus in the posterior urethra, while others contend that when the urine is acid the gonococcus will not invade the walls of the bladder. It seems certain, however, that if, in the beginning of the inflammation of acute gonorrhea, there is increased frequency of urine and burning, with marked ardor, that something must be done in the way of palliation, and, exclusive of hot sitz baths, absolute rest and a milk diet, nothing lessens this symptom so much as do the alkalies. Also, as pointed out by Pedersen, no great inhibition of the gonococcus will be caused by any medicament taken by the mouth and excreted by the urine; consequently, any germicidal treatment should be aimed at the infection in the anterior urethra before it has reached the posterior urethra or bladder. Therefore, any treatment that renders the urine alkaline during the first stage of acute urethritis, such as the reduction of the amount of meat ingested, the drinking of plenty of vichy, and the administration of an alkali, is of advantage in gonorrhea.

The best alkalies to administer are potassium acetate, potassium bicarbonate and potassium citrate. There is no special advantage of any one over the other two. The acetate is slightly more actively alkaline, the bicarbonate the most disagreeable to take and the citrate the pleasantest. This may be given as:

℞.	gm. or c.c.		
Potassii citratis	40|	or	ʒix
Aquæ	200|		fl.℥vi

M. et sig.: Two teaspoonfuls, in water, three times a day, after meals and at bedtime. The same dose may be administered more frequently, if deemed advisable.

As soon as the first acute symptoms are over, the alkali should be stopped, as it is not well for a healthy condition of the mucous membrane of the bladder to keep the urine alkaline for any considerable time. At this time it seems well to begin the administration of salol or urotropin (hexamethylenamin), as thought best. If there is any irritation of the kidneys, salol, on account of one of its decomposition products being phenol, should not be used, phenol being irritant to the kidneys. If it is administered, it is well given as follows:

℞.	gm.		
Phenylis salicylatis	5|	or	gr.lxxv

Fac capsulas siccas, 20.
Sig.: A capsule every four hours.

As pointed out by Pedersen, as soon as posterior urethritis has developed, which occurs in the majority of cases of gonorrheal urethritis, one of the balsams is indicated, unless there is vesical irritation, as shown by great frequency of urination with small amounts of urine passed. For the reasons above stated santal oil seems to be one of the best treatments and may be administered as follows:

℞. Capsulas olei santali flexibiles, āā ....m. x
No. 25.
Sig.: A capsule three times a day, after meals.

If there is no diminution in the amount of pus in the second glass of the two-glass test, and there are no symptoms of over-action of santal wood (viz., no pains referred to the ureters, or lumbar pains, and no special indigestion), two of these capsules three times a day may be taken.

It should be emphasized that no patient with gonorrhea can be well treated unless at each office visit he passes urine, that has been retained for at least three hours, into two glasses, he dividing the amount as nearly equally as his judgment permits. The washout from the urethra can thus be examined in the first glass, and the urine from the bladder and posterior urethra be examined in the second glass, and the conclusions thus arrived at will many times decide the treatment that is needed.

All balsam treatment may be stopped as soon as the posterior urethritis is cured. If, on the other hand, the posterior urethritis does not improve, the balsam may be increased in amount, or, if the posterior urethritis tends to become chronic, local posterior urethral treatment is indicated. It is also wise to demonstrate to the patient that, although the anterior urethral discharge may have ceased, he is not well until the posterior urethra is healed.

If it is preferred to use urotropin (hexamethylenamin) as a bladder and posterior urethra germicide treatment (and if the bladder becomes actually infected there probably is no better treatment), it may be given as follows.

℞.	gm.		
Hexamethylenaminæ	|	or	ʒiss

Fac chartulas, 20.
Sig.: A powder, in a glass of water, four times a day.

Pedersen treats the anterior urethritis, which is the starting point of the gonorrhea, with injections of organic silver compounds, and believes that if there has not been a previous infection, and if the tissues are healthy, the gonococci may be caused to disappear from the discharge within a few days, even within forty-eight hours. While it may not be often possible actually to abort acute gonorrheal urethritis by thimethod, he believes that the first stage can be greatly shortened.

The silver compounds that may be used for this purpose are albargin, argonin, argyrol, novargon and protargol. The strength of the solution used is generally, at first, 1 per cent., which may be increased later, after the urethra becomes less sensitive, to 2 per cent. Pedersen injects a urethral syringeful into the anterior urethra, and has the solution retained from five to ten minutes, in the incipient stage of the disease.

The patient, of course, should be carefully instructed first how to pass the urine and then how to use the syringe and how to retain the fluid. The length of time that he should retain it depends on the length of time that there is burning after the injection has been evacuated. If the burning lasts a considerable time, the injection should be retained a shorter time. Unless there is a contraindication of much pain and burning, the retention of the silver solution for five minutes, and perhaps longer, is certainly more likely to allow the germicide to penetrate more deeply into the pockets of the urethral folds and kill the gonococci which are there hidden.

Pedersen advises the use of this injection "every three hours for the first twenty-four hours, and every four hours thereafter." Every fourth day he examines a smear of the discharge to see if gonococci are still present. As they diminish in number the strength of the fluid is reduced and the frequency of its injection is diminished from four times daily to only twice daily.

"After the gonococci have been absent from the discharge for from three to seven days (depending on the severity of the infection in the given patient) the injection is reduced to once a day, and from five to ten days later (again depending on the patient) it is discontinued altogether."

This frequent injection of the urethra would seem a little strenuous for the patient, and might need to be modified if it had caused much swelling and inflammation. Pedersen does not speak of hot sitz baths if much inflammation or irritation is present. They are certainly of great advantage.

He does not believe that irrigation is often indicated in anterior urethritis, and we can but agree with him that there are only "two indications that justify instrumentation of an acutely inflamed urethra, viz.: retention of urine not yielding to all the lesser means for its relief, and extremely severe posterior urethritis." It is certainly not justifiable to give any great pressure to the delicate urethral membrane by any irrigation method. Such irrigations may not only force the gonococci into deeper tissues as well as into the posterior urethra and perhaps bladder, but may so injure the mucous membrane as to cause long protracted chronic inflammation and strictures.

As soon as the gonococci have disappeared and been absent for several days a continued catarrh of the anterior urethra is best treated by astringents, and there is probably none better than the generally used zinc sulphate. Pedersen uses this salt in solution "up to two grains to the ounce" (.4%), and advises injection twice daily, rarely three times daily, and then he gradually reduces the frequency. While zinc sulphate is often combined with several other ingredients for injection, such as fluid hydrastis, boric acid, etc., it probably acts as well in simple solution, as follows:

℞.	gm. or c.c.		
Zinci sulphatis	50	or	gr. x
Aquæ	100		fl.℥iv

M. et sig.: Use externally as directed.

This subacute stage of gonorrhea should cease in about two weeks, and if it persists longer it seems probable that there is some complication of a previous inflammation or a localization that should be definitely treated. If at any time during this subacute stage the secretion shows gonococci, Pedersen again uses the silver albuminoid injection. During this stage the same restricted diet should be continued, but more exercise may be allowed.

If posterior or anterior urethritis persists with gonococci absent after the period of subacute inflammation has passed, Pedersen advises the use of nitrate of silver solutions. The whole length of the anterior urethra may be treated through an endoscope by means of a cotton swab medicated with 0.5 or 1 per cent. nitrate of silver solution; or there may be instilled by means of a deep urethral syringe a syringeful of a "1 to 5,000 to 1 to 250" solution of nitrate of silver, or a few drops of a 0.25 to 0.5 per cent. solution. Such treatment should not be repeated oftener than once in five days, and Pedersen says once in seven days may be a safer average. The passing of all instruments through the urethra, even in this late stage of gonorrhea, should be done with the greatest of care, and thin, bland oils are the best lubricants.

If the morning drop persists Pedersen believes that follicular urethritis is probably present, and thinks that irrigations are then advisable, as if solutions pass from the anterior urethra back into the bladder they cleanse the mouths of the follicles which are directed forward, and the retained secretions are thus removed. He would use for this purpose a solution of 1 to 30,000 of bichlorid of mercury or a saturated solution of boric acid, or a 1 to 2,000 potassium permanganate solution. The solution selected would be given by the ordinary irrigation apparatus, viz., a short glass urethral tube and the pressure necessary to cause the solutions to flow gently into the bladder.

If there is great disturbance from the posterior urethritis, Pedersen would put the patient to bed, and believes that the excuse may be present, even in the acute stage of gonorrheal urethritis, for first washing the anterior urethra with boric acid solution and then anesthetizing the mucous membrane with a 2 per cent. solution of eucain and passing a soft rubber catheter, 14 to 16 French, into the deep urethra, and then instilling into the deep urethra two or three fluidrams (from 10 to 15 c.c.) of a silver albuminoid solution, or a solution of nitrate of silver in strength of 1 to 5,000 to 1 to 1,000. He finds one such instillation may greatly relieve the patient of his distressing symptoms. This treatment may be repeated in a day or two, if it prove to be necessary.

It should not be forgotten that these apparently severe symptoms of a posterior urethritis may really be a prostatitis, or even the beginning of a prostatic abscess.

A posterior urethritis pure and simple in the acute stage of gonorrheal arthritis will rarely need irrigation treatment. As a general rule, it will be found that hot baths, absolute rest, a milk diet and the administration of alkalies will within twenty-four hours stop the intensity of the symptoms.

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For other information see second page following reading matter]

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THE INTRAVENTRICULAR INJECTION OF MENINGOCOCCUS SERUM

During the past year the results from the use of Flexner's serum in the United States and Great Britain have been most gratifying. The percentage mortality figures of former years now represent the recoveries. In Germany Kolle and Wassermann[1] and Jochmann[2] have been using a similar serum but without any such success, since the secret of the successes with Flexner's serum lies in the mode of application.

Flexner[3] has shown that the serum must reach the causal micro-organism in a certain degree of concentration, and this it is impossible to obtain by subcutaneous injection; it must be injected directly into the subarachnoid space. The bactericidal power of the serum in the proper strength can be demonstrated in test-tube experiments. It must be admitted, however, that clinical observers have attested an antitoxic[4] property which, it has been suggested, may be taken advantage of by the subcutaneous application. Some believe that a combination of the two methods of injection is indicated—the subcutaneous serum to neutralize the endotoxin liberated by the action of the intraspinal serum on the meningococci.

Recently attention[5] has been drawn to the fact that the lateral ventricles of the brain may serve as a habitat in which the organisms persist and develop after they have died out in the spinal subarachnoid space. Here, out of reach of the serum injected intraspinally, they may continue to exist and be a constant menace, accounting perhaps for relapses; moreover, such intraventricular bacteria may cause inflammation leading to hydrocephalus and death. Evidence of such an associated inflammatory process in the ventricles in cases of meningitis was long ago[6] demonstrated at the autopsy table in the dilated ventricles and the well-marked granulation and thickening of the ependymal lining. Indeed, the condition of pyohydrops ventriculorum was found postmortem as early as 1805.[7]

Although the method of puncture of the lateral ventricles and withdrawal of fluid has been used in hydrocephalus, it is only recently that the introduction of a foreign serum into the ventricles has been attempted. The way has been pointed out to this third mode of application of the specific antimeningitis serum. In a report[8] of its use in a case in which the meningococci abounded in the ventricular fluid after the spinal fluid had become sterile, the advisability of performing ventricular puncture in the acute stages of persistent and relapsing cases is emphasized. If meningococci are found in the fluid withdrawn, the administration of serum, under proper precautions, directly into the ventricles is indicated. In this way it may be possible to avoid hydrocephalus and still further to reduce a mortality already remarkably lowered by the use of meningococcus serum.

THE HOUSING PROBLEM

The serious student of social conditions will undoubtedly find for many moral economic and physical ills a common cause—the vicious method of housing the multitudes in our great cities. Self-respect decays where facilities for cleanliness are denied and where a decent privacy is impossible; the instinct of thrift is nipped in the bud by surroundings in which self-improvement seems impossible; and morals, finances and health suffer together in disease-breeding dwellings. Such conclusions have been forced on students in Washington—a city with few manufacturing or commercial interests and with few streets which suggest extreme poverty by their exterior. There was a time when Connecticut Avenue, ignorant of the existence of Willow-tree alley, used to boast that Washington had no slums. As a matter of fact, many blocks in respectable and even well-to-do neighborhoods of Washington are honeycombed by alleys swarming with an obscure population. The conditions revealed by the Washington Civic Center through the work of its Committee on Housing the People, and recorded by Dr. George M. Kober,[1] were disgraceful.

Similar investigations elsewhere have shown the existence of equally baneful overcrowding in other cities. This is an entirely logical result of the indifference of the more enlightened half of the world to the privations of the other half; and when Nemesis, in the form of tuberculosis, scarlet fever, and many another dread disease, issues from the tenement the careless dweller on the boulevards has small right to complain of the "mysterious dispensations of Providence." So long as greed and shortsightedness continue business partners, and the firm is allowed to operate unchecked, so long will congestion and disregard of sanitation continue to breed crime, immorality and disease; but to say this is neither, on the one hand, to excuse the community which tolerates such conditions, nor, on the other, to point out a practical solution of the problem.

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[1] Kolle and Wassermann: Deutsch. med. Wchnschr., 1906, xxxii, 16.

[2] Jochmann: Deutsch. med. Wchnschr., 1906, xxxii, 20. Schöne: Therap. d. Gegenw., 1907, xlviii, 52.

[3] Flexner, S., and Jobling, J. W.: Jour. Exper. Med., 1908, x, 141.

[4] Ladd, L. W.: The Journal A. M. A., Oct. 17, 1908, li, 1315. Sladen, F. J.: The Journal A. M. A., Oct. 17, 1908, li, 1318; Old Dominion Jour. of Med. and Surg., 1908, No. 7, 241.

[5] Knox, J. H. M., and Sladen, F. J.: Arch. Pediat., 1908, xxv, 761.

[6] Ziemssen: Handbuch der acuten Krankheiten, 1876, p. 683. Hulsman: Inaug. Diss., Kiel, 1889. Councilman, Mallory and Wright: Epidemic Cerebrospinal Meningitis, Boston, 1898.

[7] Joslin: Am. Jour. Med. Sc., 1900, cxx, 441.

[8] Cushing, H. W., and Sladen, F. J.: Jour. Exper. Med., 1908, x, 548.

[1] The History and Development of the Housing Movement in the City of Washington, D. C.

Everyone who has given any attention to the tenement-house question knows that the worst plague spots in great cities yield most exorbitant profits to the owners; but it is perhaps not so well known that comfortable, sanitary dwellings, suited to the needs of city wage-earners, can be built to offer at a moderate rental, which will yet yield a reasonable profit to an investor. The problem, then, has two aspects: one, to prohibit—or, what amounts to the same thing, to render unprofitable—the insanitary tenement; the other, to demonstrate the practicability of the model tenement as a business proposition. To meet the first phase of the question it has been proposed to gauge the value of tenement-house property in condemnation proceedings, not by the rents derived from it, but by its sanitary condition. Various successful efforts have been made to show the desirability of sanitary tenements as an investment. Dr. Kober, in the work previously referred to, describes the movement for the erection of model tenements undertaken by the Washington Sanitary Improvement Company under the leadership of Surgeon-General Sternberg, which has proved the possibility of providing sanitary dwellings, at a low rental, but still yielding 4 per cent. on the investment. This example deserves to be extensively imitated. It is to be hoped that some day the competition of low-priced sanitary dwellings and the pressure of the law together may make the insanitary tenement an utterly unprofitable investment.

PUBLIC HEALTH AND THE GOVERNMENT

It is a singularly felicitous coincidence that the last address given by the President-elect as a private citizen should have been delivered on Washington's birthday, at the University of Pennsylvania, on the subject of "The Present Relations of the Learned Professions to Political Government." No occasion could be more appropriate for such an address than the birthday anniversary of our first President, nor any place more suitable than the seat of the first American university, organized in 1765, which granted, in 1768, the first medical diploma issued in America. The recognition of the obligations which members of the learned professions owe to the government and the emphasis of the political duties of the educated classes are most opportune. Mr. Taft's address can be accepted as a forecast of the character of his coming administration.

After emphasizing the "duty of every citizen, no matter what his profession, business or trade, to give as much attention as he can to the public weal and to take as much interest as he can in public matters," Mr. Taft discusses the relation of the different professions to the government. While the entire address is thoroughly worthy of careful consideration, the views expressed regarding the present relations existing between the medical profession and the government are of especial interest. After discussing the minister, the teacher, and the journalist, Mr. Taft says: "The next profession for consideration in its relation to governmental matters is that of medicine. Until very recently its influence has been practically nothing in a professional way. . . . Of late years . . . the functions of government have widened and now embrace, in a real and substantial way, the preservation of the health of all the people." The advances which have been made along sanitary lines in recent years are enumerated, including the increasing importance of medical work in the tropics, the value of sanitary administration in maintaining the Army and Navy and in the construction of the Panama Canal, the prosecution of which, Mr. Taft says, has been rendered possible by the "triumph, in the name of the medical profession, in the discovery of the real cause of yellow fever and malaria and the suppression of those diseases." Mr. Taft further declares that modern sanitary engineering "confirms the governmental importance of the profession of medicine and the kindred technical professions of chemistry and engineering and all branches of physical research."

Particularly interesting are his views on the necessity and possibility of a national department of public health. "So marked has been this increase in the importance of the medical profession in governmental agencies that the doctors themselves have organized a movement for the unification of all agencies in the federal government used to promote the public health in one bureau or department, at the head of which they wish to put a man of their own or kindred branch of science. How near this movement will come in accomplishing the complete purpose of its promoters only the national legislature can tell. Certainly the economy of the union of all health agencies of the national government in one bureau or department is wise." Discussing the advisability of placing a physician at the head of such a department, Mr. Taft very truly says that it is "the capacity to organize, to coordinate and execute that is needed at the head of a department and not so much deep technical or professional skill." Far more important, however, than the discussion of the future head of such a department are Mr. Taft's views regarding the importance of governmental recognition and approval of the results of modern medical science: "It is becoming more and more clear that the extension of governmental duties into a territory covered by the profession of medicine is bringing physicians more and more into political and governmental relation and we may expect that in the next decade they will play a far greater part than they have heretofore and it is proper that they should."

Mr. Taft's admirable address shows plainly that he is in complete accord with the present movement for the conservation of the lives and health of the people and that during his administration we may anticipate some definite and tangible developments in the suppression and prevention of unnecessary and avoidable diseases. Whether the national health organization shall be a bureau or a department, whether it shall be headed by a physician with executive ability or a trained layman of scientific standing, these questions are all matters of administration and expediency and are comparatively trivial in comparison with the great object of such a movement—the saving of life and the reduction of disease and suffering.

THE COUNCIL ON PHARMACY AND CHEMISTRY; ENCOURAGING OUTLOOK

After four years of campaigning against conditions that, even to the most optimistic, seemed discouraging at first, it is now quite apparent that, with eternal vigilance and constant advance, the Council on Pharmacy and Chemistry need not fear the ultimate results of its work. The warm appreciation and support accorded to this body by an ever-increasing number of practitioners leave no room for question as to the fruitfulness of its labors. That the work has been burdensome is, of course, well known, but it is not so clearly appreciated that, while the work is done primarily for the clinician, it was at first carried on almost entirely by a group of altruistic men who had, themselves, no clinical interests and whose only reward lay in a sense of loyally serving an important cause. It has been frequently evident, however, that some of the questions to be decided have in them points that can be satisfactorily passed on only by those who, while trained to sharp appreciation of the purely scientific aspects of the questions, also possess training and experience in practical bedside work.

Recognizing this, the Board of Trustees last year appointed two clinicians to the Council; and the desirability of adding a practitioner, who should represent other fields of medical practice, has just been evidenced in the appointment of Dr. John Howland of New York. Dr. Howland is instructor in contagious diseases in the College of Physicians and Surgeons of Columbia University. His special fitness for the work is attested by the fact that he has had long training in the problems of general pathology as they relate to clinical work, as well as in chemical investigations dealing with questions of digestion and metabolism. In addition to this, he has been continuously engaged in a general medical hospital service and in teaching, his specialty being pediatrics. His training will therefore be of special value to the Council in passing on questions bearing on the treatment of infectious diseases, the use of serums, etc., as well as in connection with the details of treatment in diseases, especially of infancy and childhood.

One of the most encouraging things connected with the advance of therapeutic reform is the spontaneity with which men, already laboring under diverse and burdensome daily work, accept as a duty the further tasks which membership in the Council imposes on them. This point receives further emphasis elsewhere in this issue,[1] where attention is called to the number of scientists, not connected with the Council, whose services have been freely given in investigations which have proved of incalculable benefit not alone to the Council, but also to the medical profession.

THE INTERNATIONAL OFFICE OF PUBLIC HYGIENE

The growth of a better understanding among nations is well shown by the recent establishment of an international office of public hygiene at Paris. The idea of having such an office for the purpose of collecting information concerning the communicable diseases, especially cholera, plague and yellow fever, was first presented for consideration at the International Sanitary Conference of Paris in 1903. At that conference there was signed an international sanitary agreement, which, among other things, contemplated the creation of an international office of public hygiene, and the task of organization was left to the French government. Plans for the organization and conduct of the proposed office were accordingly prepared and made the subject of a conference held in Rome, Dec. 3-9, 1907. As a result of this conference an arrangement and organic statutes were edited and signed by delegates from twelve countries. This instrument was ratified by the President of the United States by and with the advice of the Senate, Feb. 15, 1908. Our country will therefore participate in the benefits to be derived from this international arrangement, and to the U. S. Public Health and Marine-Hospital Service[†] much credit is due for bringing this about. The arrangement which was concluded for a period of seven years definitely authorized the new office, provided for its control by an international committee, outlined its duties, and apportioned the expense of maintenance among the interested countries. The principal objects of the new office are to collect and bring to the knowledge of the participating countries facts bearing on the public health, especially as concerns infectious diseases and their suppression. In sanitary matters, early and accurate information is essential to good administration. The new International Office of Public Hygiene should be able to supply this information more economically and promptly than can be done by an individual country, inasmuch as it is authorized to communicate directly with all national health agencies throughout the world. The information thus collected being both scientific and practical in character should be of great service in the quarantine and sanitary administration of the interested nations.

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[1] Pharmacology Department, page 716.

[†] U. S. Public Health Reports, Jan. 8, 1909.

MR. STRAUS AND THE NEW YORK MILK COMMITTEE

The practical benevolence of Mr. Nathan Straus, who for many years has maintained, single-handed, milk stations in New York and elsewhere for the distribution of properly modified and pasteurized milk, is a household word. New York has also another similar agency occupying itself with the feeding of infants, namely the New York Milk Committee, on which are many philanthropists of prominence, including several of New York's leading pediatricians. This latter institution, it seems, has not received the public support that it deserves, and is in some danger of extinction, in consequence. Mr. Straus generously came to its aid recently not only with expressions of regret at its critical condition and with a hearty commendation of the value of the work done by it, but also with practical financial aid; this, too, notwithstanding the expense entailed in the same cause by his own personal benefactions. It is to be hoped that this generosity will stimulate the general public of New York into more worthy cooperation until such time as the municipality itself shall realize its duty in this direction. We understand that the committee started its depots only last year, the object being to supplement the efforts of the Straus beneficence by unifying public opinion by the added experience and practices of a committee of citizens; but now it seems that a suggestion is made looking toward the unification of the milk philanthropies of the city so as to effect a big economy in money and effort. There are points of difference in procedure which certainly seem to warrant a continuance of the special work of the committee. For instance, while Mr. Straus' benefaction confines itself solely to the distribution of pasteurized milk, placing absolute safety before all other considerations, the committee has instituted comparative observations as to the relative nutritional value of a milk, pure at the outset, when served raw and when subjected to pasteurizing temperature. It has further laid stress on the importance of having mothers nurse their babies, and, in the event of their being unable to do so, of teaching them to modify and prepare the milk at home. It is to be hoped that some means of unification will be able to be effected which shall preserve the valuable characteristics of both organizations.

Medical News

ALABAMA

Hospital Staff Election.—At the annual meeting of the staff of St. Vincent's Hospital, Birmingham, February 10, Dr. Cunningham Wilson was elected president; Dr. Lewis Whaley, vice-president, and Dr. Carl A. Fox, secretary.

Personal.—Dr. Edward L. Marechal, Mobile, announces that he is no longer connected with the *Mobile Medical and Surgical Journal.*——Dr. Herschel W. Bass has been made physician at the Bryce Hospital, Tuscaloosa.——Dr. Rhett Goode has been re-elected health officer of Mobile; Dr. Charles A. Mohr, chairman of the committee of public health, and Dr. Eugene De B. Bondurant, secretary of the board of censors.——Dr. Thomas J. Brothers has succeeded Dr. Emmet K. Moon as city physician of Anniston.

Physicians Exonerated.—The Lauderdale County Medical Society, by unanimous vote, has sustained the verdict of the board of censors of the society exonerating Dr. Albert S. Zimmerman, Florence, county health officer, against whom a charge of incompetency is said to have been preferred by Dr. Eugene C. Lindsay in December last.——The grand jury, after thorough investigation of the charge against Dr. Thomas A. Jones, East Lake, Birmingham, due to the sudden death of J. A. Baker, supposedly by poison, has exonerated Dr. Jones.

CALIFORNIA

Tuberculosis Clinic Opened.—The first free tuberculosis clinic in San Francisco was opened informally January 18. Twenty applicants for treatment appeared on the first day.

Found Not Guilty.—Dr. Kathryn Ellis, Bakersfield, charged with the murder of Mrs. William Eardley, was found not guilty January 30, after a jury deliberation of less than ten minutes.

Lilianstein in San Francisco.—Dr. Siegfried Lilianstein, a well-known alienist of Nauheim, Germany, arrived in San Francisco from Japan, February 6, on a trip around the world. He is making special investigations on this journey of the conditions obtaining in hospitals and asylums for the insane.

Affiliates with State University.—The College of Medicine of the University of Southern California has become affiliated with the University of California, Berkeley, the application of the faculty of the former institution for transfer having been approved by the trustees of the University of Southern California January 28.

Personal.—Dr. Victor G. Vecki, San Francisco, has returned from Europe and resumed practice.——Dr. Ralph W. Avery, South Pasadena, has taken the practice of Dr. George A. Broughton, Oxnard, who after postgraduate work in the east, will locate in Los Angeles.——Dr. Frederick T. Bicknell, Los Angeles, for nearly ten years president of the California Hospital, who was recently retired at his own request, was presented with a gold watch by his colleagues at a dinner given in his honor.——Dr. Charles H. Whitman, Los Angeles, has been appointed superintendent of the county hospital, vice Dr. David C. Barber.——Dr. William R. Severson, Los Angeles, has moved to Goldfield, Nev.——The cottage of Dr. Samuel P. Reed, Mayfield, was burned with all its contents February 10.

COLORADO

Physician Fined.—Dr. Andreas Anderson, Ault, is said to have been fined $600 and costs February 10, for selling liquor without a license, and to have paid the fine.

New Buildings at Naval Tuberculosis Hospital.—The Federal Government is about to erect fifty new buildings at the Naval Hospital, New Fort Lyon, at a cost of $150,000. Each building will accommodate three patients.

Bequest to Aid Study of Tuberculosis.—By the will of the late Dr. Charles Denison, $10,000 is bequeathed for the furtherance of the study of tuberculosis. The will stipulates that a prize of $1,000 shall be given biennially for the best essay presented.

State Board Election.—The State Board of Health, at its annual meeting, February 10, elected Dr. Vivian R. Pennock, Longmont, president; Dr. Lewis E. Lemen, Denver, vice-president; Dr. Hugh L. Taylor, Denver, secretary, and Dr. Crum Epler, Pueblo, treasurer.

Students' Medical Society.—A medical society has been formed by the students of the Medical School of the University of Colorado, based on the plans of a county medical association, and known as the Students' Medical Society of the University of Colorado. Meetings are held twice a month, and in addition to papers presented by the students, men of prominence in the medical profession present papers at each meeting.

Personal.—Dr. Julius L. Mogulesko has resigned as bacteriologist of National Jewish Hospital for Consumptives, Denver, and has returned to New York City.——Dr. A. G. E. Nordlander, Boulder, has been appointed physician of Boulder county.——Dr. Benjamin L. Jefferson, Steamboat Springs, has been appointed registrar of the State Land Board.——Dr. William T. H. Baker, Pueblo, was operated on at St. Joseph's Hospital, Denver, January 20.

Physicians' Post-Graduate Clubs.—The Post-Graduate School of Latimer County Medical Society, at its meeting, February 10, adopted resolutions recommending that the law requiring a tax on all dogs be rigidly enforced, and that all dogs not taxed be impounded or killed.——At the meeting February 17, infectious diseases were discussed, and Dr. George Glover, head of the Veterinary Department of the State Agriculture College, explained the necessity for and the results arising from the investigation of milk. meats, fruits, vegetables and other food products.——The Fremont County Physicians' Post-Graduate Club was organized January 18. Dr. Royal C. Adkinson, Florence, was elected director, and Dr. Wilbur T. Little, Canon City, reporter. The club will take up the course of study prescribed by the American Medical Association.

CONNECTICUT

Tuberculosis Dispensary Opened.—On February 9, the Fairfield County Antituberculosis Association opened its dispensary at Bridgeport. A number of physicians of the city have volunteered their services as staff and the dispensary will be open from 12 to 1. 5 to 6, and from 7 to 9 p. m. The work of the association is not only for the relief and cure of the suffering, but is also intended to be educational and prophylactic.

January Deaths.—During January there were 1.359 deaths, 80 more than for the previous month, 198 less than for January, 1908, and 130 less than the average for the month for the five years preceding. The death rate for the entire state was equivalent to an annual rate of 15.8 per 1.000. The deaths from infectious diseases were 226. or 16.6 per cent. of the total mortality. Pneumonia. nervous diseases, tuberculosis and heart diseases, in the order named, were the chief causes of death.

Personal.—Dr. Winford H. Smith. superintendent of Hartford Hospital, has been selected as chief medical superintendent of Bellevue and Allied Hospitals, New York City. An informal dinner was given by the medical and surgical staff of the Hartford Hospital to Dr. Smith, February 1.——Dr. George E. Ober has been re-elected president of the Bridgeport board of health.——Dr. Kenneth E. Kellogg, New Britain, has suffered the loss of his wife, February 6. from peritonitis, following an operation for appendicitis.

FLORIDA

Personal.—Dr. James H. Randolph, Chattahoochee, has been appointed assistant physician at the Florida Hospital for the Insane. Chattahoochee, vice Dr. Robert L. Goodbred, resigned.

State Health Day.—On February 12, which was designated by the Superintendent of Public Instruction as "State Health Day," programs were carried out in the various schools, including quotations regarding health. care of the body, fresh air, and alternating readings of sections from the health catechism.

Tuberculosis Exhibit.—The traveling exhibit of the National Association for the Study and Prevention of Tuberculosis. which is located during January, February and March in Florida, opened in Jacksonville, January 23. The exhibit then was moved to Pensacola. from there will be taken down the East Coast and afterward to Tallahassee.

Improvement in State Hospital.—The Board of Commissioners of State Institutions has made provision for two clinical assistants, graduates of reputable medical schools, at a salary of $30 per month and board. After April 1 a visiting staff will be appointed, consisting of not more than seven physicians of the state, each of whom shall be a specialist in the particular field in which he is appointed; the visiting staff to serve without compensation, but their expenses on official business to be defrayed by the state.

State Board of Health Report.—At the annual meeting of the State Board of Health. February 10, Dr. Joseph Y. Porter, Key West, state health officer, reported that during the year 59 cases of smallpox, 114 cases of malarial fever, 247 cases of diphtheria. 396 cases of typhoid fever and 393 cases of tuberculosis had been reported. Special subjects relating to sanitation and individual hygiene were discussed from time to time in the monthly sanitary publication of the board. He made the following recommendations: That the measures for promoting and protecting health, recommended in 1907. be presented to the legislature again this year. emphasizing the necessity of, and asking for. such remedial assistance as this enactment would give: that the board be vested by the legislature with such authority to make and enforce rules as is conferred on the Railroad Commission: that it be empowered to make rules and regulations with authority to enforce the same; that a bureau of vital statistics be made a feature of the state government with prompt reports of all births and deaths; that the station-houses, waiting-rooms and sleeping cars be kept clean. well ventilated and sanitary; that authority be given the board to assist within reasonable limits the indigent tuberculous of the state: that it be given permission to accept gifts from philanthropic persons, either of money or lands, and apply the same as they think best, and that it may be empowered to equip a laboratory for the investigation of disease agencies.

GEORGIA

Tuberculosis Sanatorium in Atlanta.—A tract of thirty-six acres on Peachtree Road has been purchased for $10,000 for the establishment of a sanatorium for the treatment and cure of tuberculosis. Dr. William S. Kendrick has been selected as medical director of the sanatorium, and Dr. Lewis M. Gaines as assistant medical director.

Personal.—Dr. Herbert Rushin, Dublin, has succeeded Dr. Charles Hicks as local surgeon of the Wrightsville and Tennille Railroad.——Dr. Thomas D. Longino has succeeded Hubert L. Culberson, resigned. as trustee of the Grady Hospital, and Dr. Joseph H. Bradfield has succeeded Dr. William B. Armstrong, deceased, as a member of the board of health of Atlanta from the second ward.

Grady Hospital Board.—At the meeting of the Grady Hospital Medical Board. Atlanta, Dr. Rufus T. Dorsey was elected chairman; Dr. William S. Goldsmith, vice-chairman, and Dr. Cyrus W. Strickler, secretary. Dr. Dorsey has appointed the following committees: Medical matters, Drs. George H. Noble, Charles G. Giddings and John C. Olmstead; examination. Drs. James N. Ellis. Alexander W. Sterling and Luther P. Stephens; conference. Drs. John G. Earnest, Luther C. Fischer and Willis B. Jones; and record, Dr. L. Benjamin Clarke.

ILLINOIS

To Honor Dr. Guthrie.—A special committee, of which Dr. William Cuthbertson is chairman. has been appointed by the Chicago Medical Society to investigate the claim of Dr. Samuel Guthrie as the discoverer of chloroform.

Personal.—Dr. John B. Legnard. Waukegan, sailed for Europe February 16.——Dr. Overton Brooks. Chicago, has returned from abroad.——Dr. Henry M. Drury, Altamont, who was adjudged insane, has been committed to the State Hospital, Anna.

Expectorators Arrested.—As a result of the crusade started again in Chicago by the health commissioner and the chief of police against men who spit on sidewalks, in street cars, and elevated trains, five violators of the ordinance were each fined $1 and $1 costs. February 17.

Plan to Prevent Blindness.—The Illinois commission to inquire into the condition of the blind will report to the legislature the following bills: To prevent ophthalmia neonatorum; to enlarge the State School for the Blind. Jacksonville; to rejuvenate the Illinois Industrial Home for the Blind. Chicago; to care for the aged blind; to create a state commission for the blind, and to appropriate $1,000 for a state census of the blind.

Millions Asked for Charity.—The State Board of Charities ask appropriations of more than nine and one-half million dollars for state charitable institutions for the coming biennium. In this budget provision is made for the establishment of one colony for the insane epileptics at Kankakee, and one at Anna; for a colony for improvable epileptics; for the purchase of a site for a new state hospital for the insane; for increased accommodation for the charges of the state, and for taking over the Cook County Hospital for the Insane, Dunning.

IOWA

Quarantine Power Vested in Local Boards.—With only three dissenting votes, the house of representatives is said to have passed the quarantine bill offered by the committee on public health. which takes the power of quarantine from the State Board of Health and vests it in local health boards.

Personal.—Dr. Thomas U. McManus. Waterloo, has been appointed a member of Iowa State Board of Health and Medical Examiners, vice Dr. Joseph H. Sams. Clarion, resigned. ——Dr. George B. Maxwell, Long Grove, who has been seriously ill with typhoid fever, is reported convalescent.——Dr. Phineas J. Montgomery has been elected president; Dr. Frank W. Dean, vice-president, and Dr. Mary L. Tinley, secretary of the staff of the Jennie Edmundson Memorial Hospital, Council Bluffs.

Actions of the State Board.—The State Board of Medical Examiners at Fort Dodge is said recently to have revoked the license of Dr. Peter K. Dahl, Fort Dodge.——Dr. H. H. De Pew, Des Moines. formerly a hernia specialist of Chicago. is said successfully to have defended himself against charges of illegal practice, brought before the State Board of Medical Examiners, which failed to confirm the charges by a vote of 3 to 3. In order to revoke a certificate, the vote of five of the seven members of the board is required.

MASSACHUSETTS

Bequest for Harvard.—By the will of Dr. John C. Cutler, Warren, Harvard College is made prinicpal beneficiary to an estate valued at about $50.000.

Alumni Meeting.—Major General Leonard Wood, U. S. Army, was the guest of honor at the twentieth annual meeting and dinner of the Boston City Hospital Alumni Association. The following are the officers of the association: Dr. Morton Prince, president; Dr. Henry W. Broughton, vice-president; Dr. William H. Robey, Jr., secretary; and Dr. William H. Prescott, treasurer.

Health Officers.—Dr. Michael J. Shea has been elected chairman of the Chicopee Falls board of health.——Dr. Frederick J. Ripley has been nominated as a member of the Brockton board of health to succeed Dr. Joseph H. Lawrence.——Dr. Irvin L. Farr has succeeded Dr. Patrick E. Hurley as city physician of Holyoke.——Dr. Edward F. Johnson has been elected a member of the board of health of Chelsea.

MISSISSIPPI

Society Meetings.—At the annual meeting of Washington County Medical Society, held in Greenville, January 8, Dr. E. Frank Turner, Leland, was elected president; Dr. Andrew G. Payne, Greenville, vice-president; Dr. Marcus O. Shivers, Greenville, secretary; Dr. James S. Jackson, Belzona, delegate to the state association, and Dr. Owen W. Stone, Greenville, alternate.

Sanitarium to be Remodeled.—Dr. Julius Crisler has purchased the Jackson Sanitarium and announces that he will erect a modern hospital building to cost $15.000 on the original site, using the old structure as a training school for nurses and a ward for charity patients. He and his associates are preparing to form an organization to be known as the Jackson Charity Hospital Association, and he promises to donate to this organization the free use of eight wards for the indigent who are in need of hospital treatment.

Faculty Named.—The following are announced as the medical faculty of the medical department of the University of Mississippi, which is to begin work in Vicksburg in September of this year: Dr. Hugh H. Haralson, professor of theory and practice of surgery; Dr. Benson B. Martin, professor of theory and practice of surgery; Dr. Sylvan Meyers, professor of therapeutics and clinical medicine; Dr. Sidney W. Johnston, professor of clinical and operative surgery; Dr. Ewing F. Howard, professor of obstetrics and pediatrics; Dr. John S. Ewing, assistant in theory and practice of medicine; Dr. James H. Fox, instructor in dermatology; Dr. Henry F. Sproles, Jr., assistant in gynecology; Dr. Mace H. Bell, assistant in diseases of the eye, ear, nose and throat; Dr. John A. K. Birchett, assistant in obstetrics and pediatrics; Dr. Vincent Bonnelli, assistant in therapeutics and clinical medicine; and Dr. J. A. Austin, assistant in clinical and operative surgery.

NEW YORK

Hospital Managers Appointed.—The following appointments of managers of state hospitals have been made: Dr. Edwin H. Wolcott, Rochester, Gowanda State Hospital; Joseph Cameron, Hornell, Willard State Hospital; Alice Larken, New York, Middletown State Hospital; Dr. John Robinson, Saranac, St. Lawrence State Hospital, and Lillie Bowles Werner, Rochester, Rochester State Hospital.

State Tuberculosis Hospital.—Senator Schultz has introduced a bill for the establishment of a state hospital for the treatment of pulmonary tuberculosis, which carries with it an appropriation of $150,000 for the purchase of a site, the erection of buildings, etc. The governor is to appoint five trustees, two of whom are to be physicians. Preference in accommodation is to be given to indigent patients.

Vital Statistics for 1908.—There were 138,448 deaths recorded in New York during 1908, and, based on the United States census of an estimated population of 8.546.356, the death rate for the year was 16.2 per 1.000. In 1907 the death rate was 17.5 per 1,000. with 9.449 more deaths. The average death rate for the last five years was 17.2 per 1.000. The death rate in Greater New York was reduced from 18.5 to 16.8 per 1.000. Rochester shows a death rate of 14; Buffalo of 15.5; Schenectady of 13.3; Yonkers of 15.3; Troy of 20.1; Rome of 19.4, and Utica of 19 per 1,000. The number of deaths from pulmonary tuberculosis was 14.316, showing an increase. Pneumonia caused 8.602 deaths. The number of deaths from cancer is steadily increasing. The total number of births was 203.159. In New York City the birth rate was 29. There were 20,000 fewer marriages during 1908 than in 1907.

State School of Sanitary Science and Public Health.—Dr. Eugene H. Porter, State Health Commissioner, in his annual report, urges the establishment of a School of Sanitary Science and Public Health at Cornell University for the purpose of training men to serve the state in public office in the protection of public health. Only $10.000 a year has been allowed him for his work against tuberculosis. He states: "The state has spent far more money for the protection of the health of cattle than it has for its citizens. Hundreds of thousands of dollars are spent annually for purposes the importance of which fade into insignificance when compared with such subjects as the prevention of tuberculosis, typhoid fever and blindness." Dr. Porter has mapped out a campaign of education to prevent ophthalmia neonatorum, and his report gives startling figures as to the dangers of ophthalmia neonatorum and the amount of preventable blindness in the state. He believes that universal pasteurization of milk should not be required, unless it can be shown that the method is not only practicable, but harmless in its results. There should be a scientific study of the pasteurization of milk and a better supervision of dairies and the bottling and distribution of milk.

New York City.

Personal.—Dr. Harry W. Lincoln has been appointed gastroenterologist of the Eastern District Hospital and the Samaritan Hospital, Brooklyn.

Public Policy Justifies Sea Burial.—The suit instituted by Dr. Chalmer Prentice against the North German Lloyd Steamship Company, for $250.000, on account of the burial of the body of his wife at sea, has been decided in favor of the steamship company.

Brooklyn Physicians Protest.—The Kings County Medical Society and the Kings County Homeopathic Medical Society have joined in a protest against the action of Commissioner Darlington in removing the assistant sanitary superintendent from the borough of Brooklyn and transferring the records of the local office to Manhattan. They threaten to take court action unless the records are returned.

Alumni Reunion.—The alumni of the College of Physicians and Surgeons in the City of New York will celebrate the fiftieth anniversary of the founding of their association by a dinner at Sherry's March 2. Dr. Samuel W. Lambert will preside. Among the speakers will be President Nicholas Murray Butler, Mr. Seth Low, Dr. Henry A. Christian, Boston, Rev. Dr. Richards, New York City, and Dr. John G. Curtis.

Gas Rebates for Tuberculosis War.—The people of New York have been asked by the Committee for the Prevention of Tuberculosis of the Charity Organization Society to assign their claim to gas rebates to this committee. It is stated that if the $12,000,000 which is to be distributed to the gas consumers were given to the work against tuberculosis the disease could be practically stamped out of the United States.

Mechanicotherapy at Vanderbilt Clinic.—A new department of mechanicotherapy was opened at the Vanderbilt Clinic, of the College of Physicians and Surgeons, February 18. The equipment, consisting of thirty steel machines, was the gift of Mrs. Ray Matshak. Dr. Charles H. Jaeger, chief of the orthopedic division and instructor in orthopedic surgery in the College of Physicians and Surgeons, will have charge of the department.

Blames School System for Deaths.—Dr. Thomas Darlington, Commissioner of Health, states that heart disease among school children is greatly on the increase. Of the defective children in the schools that have been examined, 3,500 had heart disease in some form. During the past two years 1.234 children have died from heart disease and only 131 of these were under 5 years of age. With the beginning of school life the rate increased from 28 at the age of 4 years to 286 at the age of 15.

Money for Charity.—The will of the late Mrs. Margaret Dows leases to the Daisy Fields Home and Hospital for Crippled Children and to the Presbyterian Hospital $5.000 each. ——The will of the late Mrs. Franklin B. Lord leaves $5.000 to the Presbyterian Hospital.——The German charity ball, on January 28, netted $11.000. Of this sum the committee has given to the German Hospital and Dispensary $2,000; to

St. Mark's Hospital, $1,300; to St. Francis Hospital, $1,300; to the German Polyclinic, $1,300, and to the West Side German Dispensary, $4,000.

Ambulance Service Discontinued.—Charles B. Grimshaw, superintendent of Roosevelt Hospital, in his annual report, agreed with the trustees with regard to the discontinuance of the public ambulance service. He is of the opinion that the ambulance service of the city, to be efficient, must be conducted as a unit. Roosevelt Hospital will care for patients brought there in other ambulances if there are vacant beds, but ordinarily the free beds are all taken by those who apply in person. The discontinuance of the ambulance service means an annual saving of $3,000 to the hospital.

Library of the Academy of Medicine.—In a letter to its members the New York Academy of Medicine states that the last year has witnessed a marked increase in the use of the library. The reading room was used at all times, and in a few years will be quite inadequate. There has been an increase of 2,532 pamphlets during the year, most of which were donated. There have been 3,212 volumes added to the library, a slight increase over the previous year. The collection of old and rare books contains 15 volumes published before 1500. During the year the Paris theses for the school years 1902-03 and 1907-08 have been added to the library, and it is regretted that there are not also complete sets of the German theses.

PENNSYLVANIA

Officers Elected.—At the February meeting of the Southwark Medical Society, the following officers were elected: President, Dr. Max Staller; vice-president, Dr. Aaron Brav; secretary, Dr. M. B. Cooperman; and treasurer, Dr. M. Blumberg.——At a recent meeting of the West Philadelphia Medical Association the following officers were elected: President, Dr. F. Mortimer Cleaveland; vice-president, Dr. Sherman F. Gilpin; secretary, Dr. George M. Boyd; financial secretary, Dr. Walter M. Miller; and treasurer, Dr. Edmund L. Graf.

Philadelphia

Organization of Psychiatric Society.—The following is the corrected list of the officers elected by the newly-organized Philadelphia Psychiatric Society: President, Dr. Charles W. Burr; vice-presidents, Drs. Albert R. Moulton, and William W. Richardson; secretary and treasurer, Dr. Wilfred W. Hawke; councilors, Drs. William H. Hancker, John K. Mitchell and Francis X. Dercum.

Tuberculosis Exhibit Opened.—The International Tuberculosis Exposition was formally opened in this city on February 15, and has been very largely attended. The exhibition is open from 10 a. m. to 10 p. m., and public lectures are delivered by prominent men at each morning and evening session. The total attendance for the week aggregated 69,124 and the largest attendance was on February 20, when 17,957 persons were in attendance.

Personal.—Dr. Joseph Price is confined to his home suffering with an infected hand.——Dr. S. Lewis Ziegler is seriously ill with facial erysipelas.——Dr. Charles K. Mills, who has been suffering with a severe attack of influenza, is convalescent.——Dr. John V. Shoemaker, who has been criticaly ill at his home as a result of a cerebral hemorrhage, is convalescing.——Dr. S. Weir Mitchell celebrated his seventy-ninth birthday anniversary February 15.——Dr. G. B. Gordon sailed for Europe February 18.——Drs. Joseph M. and Austin O'Malley have resigned as visiting physicians to St. Agnes' Hospital.

To Aid Matriculates.—In view of the fact that many applicants for admission to the Medical Department of the University of Pennsylvania this year will be unable to meet the new requirements, especially in physics, chemistry and zoology, provision has been made to ensure the entrance of those otherwise prepared. Applicants may enter, conditioned in the subjects above named with the understanding that these conditions be worked off. The University Summer School has provided courses, the successful completion of which will ensure admission without condition. The summer school will be in session daily except Saturdays for six weeks, beginning July 6 and ending August 17.

Sanatorium for Consumptive Jews.—Feeling the need for a separate institution for the treatment of indigent Jews suffering from tuberculosis, the Hebrews of the southern section of the city have raised funds and purchased a farm in Delaware county on which it is purposed to erect a sanatorium. The institution is to be known as the Philadelphia Jewish Sanatorium for Consumptives, and will be open for the reception of patients on May 1. The officers are: President, S. C. Krause; vice-presidents, Isaac Leopold and M. J. Speiser; treasurer, B. F. Miller; secretary, Dr. Abraham J. Cohen; financial secretary, Charles Lipschultz, and directors, S. K. Louchheim, Dr. Lazio S. Rubenson, Dr. Max Staller, Milton Merold, Benjamin Finberg and Rabbi Levintahl.

Filtered Water for Whole City.—Philadelphia's oldest water works at Fairmont, which has been supplying the city with water for 100 years, was put out of commission, February 19. This great turbine system supplied the city annually with 8,000,000,000 gallons of water. At the same time the great main containing filtered water was turned on and all but a small section of the city is now supplied with filtered water. By March 1, with the possible exception of two small districts, the whole city will be receiving filtered water. Of the 300,000,000 gallons required for the city's daily consumption, Torresdale will furnish 240,000,000 gallons, Roxborough 22,000,000 and Belmont 40,000,000. For the next three weeks, however, the health authorities warn consumers to continue to boil all water used for drinking purposes, as that length of time will be required to cleanse the service pipes of the accumulations of dirt deposited by the raw water.

SOUTH CAROLINA

Antituberculosis League Organized.—Anderson County Antituberculosis League was organized at Anderson January 19. Dr. Wallace H. Nardin was elected president, and Dr. J. Bennett Townsend assistant secretary and treasurer.

Societies.—At the annual meeting of the Fourth District Medical Society, held in Seneca, January 25, Dr. Edgar A. Hines, Seneca, was elected president; Dr. William A. Trippe, Easley, vice-president, and Dr. Ernest W. Carpenter, Greenville, secretary-treasurer. Easley was selected as next place of meeting.——At the January meeting of Lexington County Medical Society, held in Lexington, Dr. Drayton M. Crosson, Leesville, was elected delegate to the state medical association, and Drs. Luther B. Ethredge, Leesville, John R. Langford, Swansea, and Joseph W. Earle, Spring Hill, were appointed members of the executive committee. A resolution was adopted requesting the Lexington delegation in the general assembly to use its best efforts to have a law passed prohibiting indiscriminate expectoration on the floors and walls of railway passenger cars, public halls and sidewalks.——Chester County Medical Society, at its annual meeting held in Chester, January 4, elected Dr. James G. Johnson, Chester, president; Dr. David A. Coleman, Blackstock, vice-president; Dr. William B. Cox, Chester, secretary-treasurer, and Drs. Calvin B. McKeown, Fort Lawn, Harvey E. McConnell, Chester, and Robert L. Douglass, Rodman, censors.——Spartanburg County Medical Society, at its annual meeting held in Spartanburg, elected the following officers: Dr. S. T. D. Lancaster, Pauline, president; Dr. Albernon R. Fike, Spartanburg, vice-president; Dr. L. Rosa Gantt, Spartanburg, secretary; Dr. William J. Chapman, Inman, treasurer, and Drs. Julian H. Allen, Spartanburg, G. F. Williams and Fred L. Potts, Spartanburg, delegates to the state society.——Florence County Medical Society has elected the following officers: President, Dr. Frank H. McLeod, Florence; vice-president, Dr. Lawrence Y. King, Florence; secretary-treasurer, Dr. John H. Peele, Cartersville; censors, Drs. Lawrence Y. King, Dudley H. Smith and N. W. Hicks, all of Florence, and delegate to the state society, Dr. John G. McMaster, Florence.——At the annual meeting of Orangeburg-Calhoun Counties Medical Association, Dr. W. L. Pou, St. Matthew's, was elected president; Dr. Manly J. D. Dantzler, Elloree, vice-president; Dr. Donald D. Salley, Orangeburg, secretary; Dr. William B. Lowman, Orangeburg, treasurer, and Dr. Michael G. Salley, Orangeburg, censor.——Horry County Medical Society, at its annual meeting, elected Dr. Allard D. Lewis, Green Sea, president; Dr. John K. Stalvey, Buckford, vice-president, and Dr. Joseph S. Dusenbury, Conway, secretary.——At the annual meeting of Columbia Medical Society, the following officers were elected: Dr. Lewis A. Griffith, president; Dr. Francis A. Coward, vice-president; Dr. Mary R. Baker, secretary-treasurer; Drs. William Weston and William A. Boyd, delegates to the state medical association, and Dr. Samuel E. Harmon, censor.

VIRGINIA

Society Meeting.—The Richmond Medical Society, composed of colored practitioners, has elected the following officers: President, Dr. J. Alexander Lewis; vice-president, Dr. J. C. Carper; secretary, Dr. Oswald B. H. Bowser; and treasurer, Dr. Robert E. Jones.

Epileptic Colony.—The General Board of Directors of State Hospitals has appointed a committee of three to examine, select and report a suitable location for the proposed state epileptic colony, and to take options on any suitable lands in Amherst county. and to do other acts which may tend to further the immediate establishment of the colony.

WISCONSIN

Opposes Free Advertising.—The Manitowoc County Medical Society has adopted resolutions declaring the advertising of physicians through the mention of names in newspaper accounts of illnesses, accidents, etc, obnoxious and unprofessional.

Appropriations Asked for Charities.—The board of control has reported to Governor Davidson that $691,700 would be required to put the charitable and penal institutions of the state in the best condition. Among the appropriations asked for are $36,000 for the State Hospital at Mendota. $111,500 for the Northern Hospital, Oshkosh. $62,000 for the Tuberculosis Sanatorium, Wales. and $50,000 for buildings for segregation at the sanatorium. Of the amount requested by the Oshkosh State Hospital, $60,000 is to be devoted to the construction of a building for the criminal insane.

Deaths in Wisconsin.—During 1908, 26,778 deaths were reported to the state health department, equivalent to a death rate of 11.5 per 1,000 of population. The most important cause of death in point of actual numbers was pulmonary tuberculosis, which caused 2,411 deaths, practically all of which were in individuals from 18 to 45 years of age Other important death causes were pneumonia, 2,333; violence, 1,438; cancer, 1,221; enteritis of infants, 974; meningitis, 625; influenza, 392; diphtheria, 386; typhoid fever, 332; scarlet fever, 126; whooping cough, 124; and measles, 70. Of the deaths from violence, 263 were due to suicide, and 21 to homicide.

Society Meetings.—At the annual meeting of the Fox River Valley Medical Society, held in Green Bay, January 19, the following officers were elected: Dr. Bernard C Gudden, Oshkosh, president; Drs Norman P. Mills, Appleton, and Sherman E. Wright, Marinette, vice presidents; Dr. Robert A. Walker, Menominee, Mich., secretary-treasurer (re elected), and Dr. William G. Nickolson, Green Bay, censor——At the annual meeting of the Milwaukee Physicians' Association, January 19, the following officers were elected: President, Dr. Arthur R. F Grob; vice president, Dr. E Wells Kellogg; treasurer, Dr. Henry J. Gramling, secretary, Dr. A A. Cooper; and censors, Drs. Peter Langland, Henry C. Werner and Fred W. Biehl.

WYOMING

Personal.—Dr. James J Monahan, Encampment, has gone to Europe for graduate study——Dr. Gaten A. Fox, Cheyenne, has been appointed local surgeon of the Union Pacific system.

Society Meetings.—At the annual meeting of Fremont County Medical Society, held in Lander, January 1, the following officers were re-elected: President, Dr. Thomas G. Maghee, Lander; vice president, Dr Albert B Tonkin, Riverton; and secretary-treasurer, Dr. Neil D. Nelson, Shoshone, Drs Arthur H Cooper and T. W. Martin, Lander, and Frederick H. Sparrenberger, Fort Washakie, were elected censors——At the meeting of the Albany County Medical Society, held in Laramie February 5, the new constitution and by-laws were adopted and the society by resolution condemned the mention in the lay press of the names of attending physicians in connection with news items regarding injuries, accidents, etc.——At the annual meeting of the Crook County Medical Society, held in Sun Dance, Dr. Robert C. Knode, Sun Dance, was elected president; Dr. Paul W. Newcomer, Gillette, vice president; Dr. Elizabeth Newcomer, secretary; and Dr John L Bostwick, Hulett, treasurer.

CANADA

Personal.—Dr. C H Godin, Ottawa, superintendent of the Marine Hospital service of Canada, is making his annual inspection tour of Vancouver and Victoria, B. C——Dr. Charles A Page, formerly of Kingsville, Ont, has returned from Edinburgh, and commenced practice in Toronto——Dr. Frank Beemer, Hamilton, for twenty years a member of the staff of the Ontario Hospital for the Insane, has resigned——Dr. Wilbert McIntyre, M.P, Strathcona, Alberta, is to be deputy-speaker of the House of Commons, Ottawa—Dr. William A Young, managing editor of the *Canadian Journal of Medicine and Surgery*, has returned to Toronto completely recovered from his recent severe illness

Hospital News.—The eleventh annual meeting of the Board of Trustees of the National Sanitarium Association, was held in Toronto January 10. Dr. W. B. Kendall, physician-in chief of the two sanatoria in Muskoka, reported that in the Muskoka Cottage Sanatorium 220 patients had been cared for in the past hospital year, and 1,696 had been cared for in the institution since it was first opened eleven years ago. In the Free Hospital at Muskoka, 258 patients had been cared for. In the two institutions nearly 3,000 patients had been cared for during the last decade. Dr. Alfred H. Caulfield, the new director of the pathologic department, told of the complete arrangements made for research work at these institutions within the past three months, the expenses in connection with which were to be borne by a Toronto citizen. An ex patient has donated $1,500 for the equipment of the laboratory; and another has agreed to donate $1,500 toward the annual salary of the pathologist. The Toronto Free Hospital for Consumptives has appointed a special visiting nurse to work among the tubercular poor of Toronto. The annual report of the Protestant Hospital for the Insane, Verdun, Que, shows that on Jan. 1, 1908, there were 535 patients, inclusive of 2 out on trial, in the institution; and that during the year 197 were admitted, making a total under treatment of 732. The patients discharged during the year numbered 109, 36 died and one escaped, leaving in residence at the close of the year 582 patients, exclusive of 4 out on trial. This is the largest number under treatment since the institution was opened. The most important contributing cause was the inferior class of immigrants brought to Canada. Seven per cent. of the patients in residence never should have been admitted. Nearly 39 per cent. of the inmates are of foreign birth. Of the patients admitted during the year, 79 were private and 118 public cases No less than 12½ per cent. of the patients were epileptics; and it was to be deplored that the Province of Quebec had no separate institution for these patients. Of the 109 who left the institution, 63 were discharged as recovered, 32 improved and 14 unimproved The percentage of discharges based on admissions was 55.3, and the recoveries 33.2. The mortality rate was only 4.91 based on the total number treated, the lowest except in 1892 and 1906

GENERAL

College Association Meeting.—The nineteenth annual meeting of the Association of American Medical Colleges will be held in the Academy of Medicine, New York City, March 15 and 16, under the presidency of Dr. Eli H. Long, Buffalo, N. Y. The Manhattan Hotel has been chosen for headquarters, and the chairman of the local committee on arrangements is Dr Egbert LeFevre, 52 W. Fifty sixth street.

Alleged Automobile Insurance.—A short, stout individual, about forty eight years of age a good talker, who gives the name of Ed. S Raynor, and claims to be manager and treasurer of the Automobile Underwriters, with headquarters in Massillon, Ohio, is reported to be selling policies providing against accidents to automobiles and automobilists and thefts of automobiles In conjunction with this, he is said to appoint one physician in each town as surgeon of the company to take care of any policy holder who may become injured, the company paying for such care at the rate of $2.50 per visit, and also paying such appointee an annual retaining fee of $200 The policy is said to cost from $25 up, according to the value of the car. Inquiry made by Dr. Henry M. Osborne, Youngstown, through the First National Bank of Massillon, brought the reply that no such company was known in that city, and that the chief of police had received inquiries about the company, but could find no such firm nor any person named Ed. S. Raynor

FOREIGN

Danish Medical Association Asks Adequate Accommodations for Insane—The two houses of parliament in Denmark recently had a communication read to each by a medical member setting forth the utter inadequacy of the present accommodations for the insane in Denmark and the urgent need for enlargement of existing institutions or erection of new. The petition is signed by all the members of the national medical association, each with his official titles Copies of the petition were also presented at the same time to the minister of justice and the executive authorities at Copenhagen. The petition states among other things that it is as inhuman to deprive an insane person of the treatment and care on which his recovery and life may depend as it would be to turn away from the hospital a person requiring an emergency operation.

London X-Ray Convention.—This convention, with an exhibition of Roentgen and electro medical apparatus, will be held in London, England, July 6-9, 1909 All branches of medical electricity will be represented. The inaugural meetings, the general meetings, the demonstrations and the exhibition will be held at the University of London, University College, Gower street, W. C. The exhibition will include all classes of electrical and physical apparatus for medical treatment. Delegates will be present from America and Europe, and representatives of the various foreign governments will be invited to take part in a discussion as to the best means of providing apparatus and training for the army and navy. The papers and debates will be in English. Papers in French and German will be accepted, provided summaries of such papers are sent in English. All papers will be reported either "in extenso" or in abstract in the Archives of the Roentgen Ray. All communications should be addressed to Ernest Schofield, Organizing Secretary of the X-Ray Convention, 11, Chandos Street, Cavendish Square, London, W.

LONDON LETTER

(From Our Regular Correspondent)

London, Feb. 13, 1909.

Another Victim of the X-Rays

The sad case of Mr. Hall Edwards, the pioneer worker with the *x*-rays in medicine in Great Britain, who has lost both his hands, has been previously described in The Journal. A similar misfortune has befallen Mr. Cox, one of the leading manufacturers of *x*-ray apparatus in London. The greater part of his right hand, including three fingers, has had to be removed, but the thumb and little finger have been saved. Some years ago he lost one of the fingers of the left hand and another operation is to be performed on it. He also has some dermatitis on the chin. As in the case of Mr. Hall Edwards, these results are due to the lack of knowledge of the dangers of the *x*-ray work which existed in the earlier years of their application to medicine.

Third Interim Report of the Royal Commission on Tuberculosis

The Royal Commission, appointed in 1901 to inquire into the relation between human and bovine tuberculosis, after the startling pronouncement of Koch at the International Congress on Tuberculosis held in London in the previous year that these diseases are distinct, still continues its labors. The commission originally consisted of Sir Michael Foster and Professors Sims Woodhead, Martin, McFadyean and Boyce. Sir Michael Foster died while the work was in progress. The earlier reports of the commission published in 1904 and in 1907 have been noticed in previous letters to The Journal. They were in direct contradiction to Koch's views. It was found that bovine tuberculosis is communicable to man and that a considerable amount of tuberculosis, especially in children, is due to milk containing the tubercle bacilli. The present report brings some new and important facts to light. The danger of milk yielded by tuberculous udders is well recognized, but the report shows that the milk of cows suffering *from visceral* tuberculosis in a large proportion of cases contains virulent tubercle bacilli, although the udders may be perfectly healthy. The report deals with 6 cows, of which 3 showed obvious signs of tuberculosis, such as cough and emaciation, while the other three were apparently healthy and tuberculosis was revealed only by the tuberculin test. The milk of the three cows which were obviously diseased caused, though not invariably, tuberculosis in guinea-pigs which were inoculated with small doses. The milk of those in which the disease was revealed only *by the tuberculin* test did not produce tuberculosis in guinea-pigs. Swine fed with the milk of these cows became tuberculous. *This is important*, because it is a common practice to feed pigs with the milk of sickly cows, which is not considered good enough for human consumption. The danger of this practice is obvious, as the pigs [illegible]re eventually used as food for man. The feces of 5 out of [illegible] of these cows were *found to contain* virulent tubercle bacilli. This is another source of infection, for in practically [illegible] [illegible]ut the best-regulated model farms the cleaning of the [illegible] [illegible]nd quarters of milch cows is confined, if attempted [illegible] perfunctory scrub with a wisp of dry hay. The [illegible]al matter that habitually finds its way into [illegible]rise and sicken most persons. The result of [illegible] [illegible]ill be an impetus to the movement which [illegible] [illegible]ome time for obtaining a better milk [illegible]anliness. The commissioners again [illegible]nt, in contradiction to Koch, that [illegible]gerous to man.

[illegible]ps of a Great Discovery

[illegible]'s discovery of the mosquito [illegible]ension of this fact as a hypothesis to the origin of malaria are famous, the steps by which he was led to these epoch-making discoveries are not generally known. Speaking at a dinner at which he was entertained by the Society of Authors, he told the story of these discoveries which proved some of the most beautiful examples of deduction ever made in medicine. An earlier worker on tropical diseases, Timothy Lewis, discovered the *Filaria sanguinis hominis* in the blood in elephantiasis. As it wriggles about in a loose sheath and shows no evidence of growth nor power of reproduction, Manson concluded that it must be the young of some other animal. This he found to be the adult filaria which lies in the lymphatics. Between the mature animal and its progeny no intermediate forms could be discovered. The question then arose, how does the young parasite contrive to pass from man to man? Although it actively moves about in its sac, it cannot escape from this, and it has never been found in any of the normal excretions. As it could not escape spontaneously from the body, it occurred to Manson that there must intervene some agent capable of piercing the skin, and that this agent must absorb the blood of the human body, and with it the parasite. The agent which satisfied these conditions was the mosquito. Then Manson made his striking discovery as to the habits of the parasite which tended to confirm his hypothesis. He determined to examine the blood of 1,000 Chinese in order to find the frequency with which the parasite occurred in human blood. The task was so great that he trained two Chinese medical students to help him. They were occupied in hospital duties, one during the day and the other during the night. The one who had leisure to work during the night brought a large number of positive results, but the one who worked during the day seldom brought any. This fact led Manson to investigate *the habits of the filaria and he found that in ordinary conditions* of health filariæ came into the blood about sunset, increased in numbers toward midnight, and gradually disappeared toward morning. This periodicity seemed to be an adaptation to the nocturnal habit of the mosquito. Then Manson persuaded a Chinaman to sleep in a bed surrounded with a mosquito netting with a door which was closed after plenty of mosquitoes had entered. Next morning *he found* dozens of mosquitoes gorged with blood clinging to the walls of the tent. In their stomachs he found filariæ, which, instead of being killed, seemed to be stimulated to fresh activity and had broken through their sacs. The problem then arose, how does the filaria reach the human body? Manson traced it through the stomach wall of the mosquito, into the abdominal cavity, and then into the thoracic muscles, and ascertained that during its passage it increased enormously from the one-hundredth to the one-sixteenth of an inch. He conjectured, but wrongly, that it might escape into water and by that road reach the human body. Later, in England, with better appliances he traced it to the proboscis of the mosquito, where he saw it outstretched, evidently waiting for an opportunity to escape. By analogous reasoning Manson was led to the mosquito hypothesis of malaria.

PARIS LETTER

(From Our Regular Correspondent)

Paris, Feb. 9, 1909.

Miller's "Consumption Cure" in Paris

The Journal has sent me[1] a clipping from the *Chicago Examiner* of January 24 regarding O. E. Miller and his "consumption cure." In the Chicago newspaper I read:

> "For the last week the sensation of medical Paris has been a new cure for tuberculosis which is being demonstrated at one of the municipal hospitals, where five deathbed cases of paupers in an advanced stage of consumption were selected by physicians. After permission had been given by the municipal board of charity they were turned over to the experimenter, a man who is neither a doctor nor a scientist, and he came to Paris only a few weeks ago virtually unknown. While his cure is a secret which he refuses to disclose, in spite of all these handicaps, he has convinced leading physicians that he has a marvelous cure for consumption and that after only three weeks' treatment the five paupers are on the way to health."

The famous "cure" of O. E. Miller is the one referred to. (See The Journal, Dec. 12, 1908, p. 2071; Jan. 16, 1909, p. 226). So far from having made any sensation in Paris or any impression on the medical world here, it was *only* with great effort and by the employment of the energy and ingenuity of a newspaper reporter that I finally succeeded in *discovering* the hospital where experiments with the "treatment" had been made. I was informed that the authorization to try this treatment had been granted, not to Miller, but to Dr Hirtz, physician at Necker hospital The administration of the Public Charities merely conformed to the rule of the hygienic service of the hospitals forbidding the heads of the said service, without express authorization from the administration, to allow any treatment to be experimentally tried on their patients, either by an outside physician or by the possessor of a secret remedy My official informant declared skeptically that a week never passed in which the administration did not receive a request for permission to try some new "treatment" for tuberculosis, and that usually there was some "institute" behind the request

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[1] Editor's Note:—We asked our Paris correspondent to investigate this sensational *newspaper report*.

Dr Hirtz told me that Miller had been recommended to him by a surgeon of the hospitals, who personally guaranteed Miller's honorable character He (Dr Hirtz) was much surprised to learn from me of Miller's checkered career and of THE JOURNAL'S investigation As for the five poor patients said by the correspondent of the *Chicago Examiner* to be on the road to recovery, the fact is that two of them are dead and the other three have left the Necker hospital and are therefore no longer under the control of Dr Hirtz

The correspondent of the *Chicago Examiner* writes that "it is probable that Miller's discovery will be taken before the French Academy of Medicine" I can affirm that this dream will never be realized The Academy of Medicine has received a warning, apropos of recent communications on the subject of alleged cures of cancer, from the *Journal des praticiens*, edited by Dr Huchard Its last number declares that, in yielding attention to such unsubstantiated assertions, the Academy of Medicine would soon become a medium for the advertising of blatant fraud The Academy is not an adjunct to the advertising pages of the newspapers or to the billboards

Admissibility to the Agrégation and the Provincial Schools of Medicine

Besides the seven *facultes* or medical colleges there are in France a number of medical schools called "preparatory schools" or *de plein exercise* A delegation of the professors in these schools recently complained to the minister of public instruction and to the premier in regard to the new regulations concerning the candidates for the teaching positions They presented, in the name of a large number of their colleagues, a resolution for the re-establishment of the former method of recruiting the teaching force of the schools, independent of the *concours de l'agregation* The minister of public instruction received the protest with the greatest attention, and the premier, M Clemenceau, who, as a former pupil of one of the medical schools, takes an especial interest in them, declared himself ready to support the demands of the professors of the schools

Accident to Professor Estor

Dr Estor, clinical professor of surgery and orthopedics for children at Montpellier, was performing an operation recently when he pricked himself on the forearm with a bistoury He attached no importance to the accident, but a few hours later he felt a sharp pain, and, shortly afterward, a phlegmon developed Since then Dr. Estor's condition has caused grave anxiety.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Feb 5, 1909

Orth on the Origin of Cancer

At the last meeting of the Prussian Academy of Sciences, our leading scientific association, Professor Orth delivered an address on this subject, in which he stated that nothing to date sustains the assumption of a parasitic origin for cancer, although such may yet be proved At present there is no analogy for such a kind of parasitism These conclusions of the great pathologist will not be agreeable to those who have published discoveries of cancer parasites and have clung to their discovery with such tenacity. At the same time, it must not be forgotten that chance may yet reveal what systematic research has overlooked like the discovery of the pale spirochete of syphilis by Schaudinn

Conflict Between the Physicians and the Sick Benefit Societies at Cologne

The contract between the organized physicians and the *Krankenkassen* at Cologne having expired February 1, the societies refused to renew it on the same conditions and the physicians have decided to refrain from attending the policy holders, even individually and for pay, except in emergency cases until the matter is satisfactorily settled The companies have secured seventy two physicians, who have accepted their terms Most of these physicians have a record as "strike breakers," and some are already under the ban of the medical tribunals of honor

Consumptive Colony in German Southwest Africa

Some time ago a Berlin physician without any personal experience in the matter suggested the German possessions in Southwest Africa as offering peculiarly favorable climatic conditions for consumptives and zealously advocated the plan of sending out a colony An influential committee was organized and funds collected, but the project has finally been abandoned, as the committee was unable to obtain testimony as to the climate being adapted for patients with pulmonary tuberculosis, while the expense is a great obstacle The money collected is to be applied for the benefit of resident consumptives in this part of Africa This experience ought to warn others not to launch enterprises for the public welfare without due consideration and information It should also teach the lesson that physicians should not allow themselves to be taken in tow by every well meant suggestion that comes along and waste their efforts in the service of Utopian schemes

The Chair of Physiology

By the decision of the minister of finance the hygienic institute is to be transformed into an institute of physiology, and Rubner confirmed as professor of physiology It is now certainly to be expected that Flugge of Breslau will be selected as the successor of Rubner.

Carnegie's Honorary Membership in the Robert Koch Foundation

The directors of the Robert Koch Foundation against Tuberculosis have unanimously elected Andrew Carnegie to membership in recognition of his generous subscription of half a million marks It is to be hoped that his permanent interest in the undertaking may be thus assured

A Judicial Decision Respecting Eddyism

Christian Science, imported from your country, has secured a considerable extension among us, although in late years it has receded somewhat Our age is rich in contrasts In spite of the greatest enlightenment in the field of religion, mysticism flourishes to day more than ever, and to this latter circumstance is owing the introduction and spread of Eddyism in Germany In spite of repeated exposures by the press, the representatives of this form of quackery still find believers who seek the help of God for the removal of disease in return for money payments to his unworthy representatives Lately a Berlin court has expressed itself in no ambiguous terms regarding Eddyism, and the decision which shows an unusually accurate conception of the matter, even for a judge, should be widely known A laborer of this city whose wife and child had been treated unsuccessfully by a prayer healer sued for the repayment of 60 marks which he had paid for the treatment Although the lower court dismissed the suit, the higher decided that the prayer healer must repay the 60 marks with interest In the decision it was emphasized that the contract which the complainant had made with the prayer healer was against good morals It would be completely incompatible with healthy social conditions if judicial recognition should be given to contracts by which one party, for a stipulated sum, should make use of his pretended intimate relations with the deity in order to induce a pretended intervention of supernatural power in the life of other persons The belief that there is some power of special divine grace for healing the sick may exist in certain circles But laying claim to such a healing power in connection with the exercise of a trade for making money based on such healing power is contrary to the general moral sentiment and can not demand the protection of the courts Moreover, the public interest in a regular system for the care of health is endangered if by the influence of Eddyism, patients are deprived of suitable and timely treatment by physicians who should be the chosen guardians of the public health Aside from the fact that by this decision the attention of the public is called in a highly satisfactory manner to the physician as the true helper in case of sickness, many Eddyite adherents may find themselves obliged to give up their business For if their patients can demand their money back and enforce the demand by law they will hesitate to spend their time and apply the power of their prayers at such risks In the interests of the public health it would be very gratifying if the decision quoted should have so favorable a result

Pharmacology

COUNCIL ON PHARMACY AND CHEMISTRY

Announcement of Election of Members and Acknowledgment of Cooperation

New Member.—At the recent meeting of the Board of Trustees of the American Medical Association, Dr. L. F. Kebler, chief of the Drug Laboratory, Department of Agriculture, and Dr. C. S. N. Hallberg, professor of pharmacy in the University of Illinois School of Pharmacy, were re-elected members of the Council on Pharmacy and Chemistry. Dr. John Howland, instructor in contagious diseases, College of Physicians and Surgeons of Columbia University, was elected to take the place of Prof. J. O. Schlotterbeck of the University of Michigan, who declined renomination.

Acknowledgment of Cooperation.—The Council on Pharmacy and Chemistry and the Board of Trustees have adopted a vote of thanks to the following for their cooperation and assistance in investigating products, and for special research work done at the request of the Council:

Daniel Base, Ph.D., professor of chemistry and vegetable histology, Department of Pharmacy, University of Maryland.

William B. Day, Ph.G., professor of pharmacognosy, University of Illinois School of Pharmacy.

G. B. Frankforter, Ph.D., M.A., dean of the school of chemistry, professor of chemistry, University of Minnesota.

N. McL. Harris, M.B., assistant professor of bacteriology, University of Chicago.

P. G. Heinemann, Ph.D., assistant in bacteriology, University of Chicago.

William A. Johnson, Ph.C., instructor in chemistry, Northwestern University Medical School.

E. O. Jordan, Ph.D., professor of bacteriology, University of Chicago.

Edward Kremers, Ph.G., Ph.D., professor of pharmaceutical chemistry, director of the course in pharmacy, University of Wisconsin.

Henry Kraemer, Ph.B., Ph.D., professor of botany and pharmacognosy, Philadelphia College of Pharmacy.

Charles H. LaWall, Ph.M., associate professor of theory and practice of pharmacy, Philadelphia College of Pharmacy.

S. A. Matthews, M.D., assistant professor of experimental therapeutics, University of Chicago.

Herbert N. McCoy, Ph.D., associate professor of physical chemistry, University of Chicago.

W. J. MacNeal, assistant professor of bacteriology; assistant chief in Research Laboratory of Physiological Chemistry, University of Illinois.

Charles H. Miller, Ph.G., M.D., assistant professor of pharmacology, Northwestern University Medical School.

Atherton Seidell, M.D., Hygienic Laboratory, Public Health and Marine-Hospital Service, Washington, D. C.

A. L. Winton, M.D., chief of Chicago Laboratory, U. S. Department of Agriculture, Bureau of Chemistry, Chicago.

"MITCHELLA COMPOUND"

A Nostrum for "Women Who Dread Motherhood"

In the pages of those publications whose advertising ethics permits them to give publicity to fake cancer cures, to deaf-cure quacks or any other of the unsavory brood which Mr. Adams exposed in the "Great American Fraud" series, the advertisement of "Dr." J. H. Dye's "Medical Institute" may be found. Dye is one of the tribe that makes capital out of the fears of the expectant mother. After drawing lurid pictures of the "untold pains" to which the young mother may be a martyr, relief is promised if the sufferer will but use Dye's "Mitchella Compound." The value of "Dr." Dye's nostrum is testified to by a hypothetical Mrs. Dare, who relates how after losing her first child she had a vision. A "white-robed angel" appeared, who delivered a flowery speech, concluding with the following peroration:

> "Go, sister, and seek freedom and peace in the use of *Mitchella Compound* and in following the teachings of that
at all,k."

smount book referred to by the "white-robed angel" is a
milk wou put out by "Dr." Dye and sold for the nominal
se exper 2. The title is "Painless Childbirth," and needless
Sa cen in 1 author does not neglect to extol the use of
separ and for pound.
ing fron ir prev
the city h hercelou Mitchella Compound "speedily cures all de-
county on w rregularities of the menstrual function, con-
stitution is k Man ion. ulceration and displacement of the
torium for Co Patrick other things too numerous to mention.
of patients on and weary women," we are told, "is composed of the purest and most carefully selected herbs which can be obtained." Possibly! But if after a period of drought one went to the woods and raked up a double handful of dried leaves, pieces of bark and any other débris that happened to be handy, the average man would find it difficult to distinguish between such rakings and "Dr." Dye's Mitchella Compound at $1 a package.

A sample of Mitchella Compound was examined botanically for us by Prof. William Baker Day of the University of Illinois. Professor Day reports as follows:

BOTANIC EXAMINATION

"I have examined botanically a sample of 'Mitchella Compound.' The sample consists apparently of a mixture of vegetable material, chiefly fragments of leaves, roots and bark, among which I have been able to identify the following:

"*Mitchella repens*—herb—commonly known as Partridgeberry or Squaw-vine.

"*Chamælirium luteum*—rhizome and roots—(*Helonias dioica*), commonly known as Starwort or False Unicorn Root.

"*Cornus Florida*—bark of the root—commonly known as Flowering Dogwood.

"*Cypripedium pubescens* or *Cypripedium parviflorum*, commonly known as Ladies' Slipper."

None of these drugs is new; all have been used at one time or another as medicinal agents, but, with the exception of ladies' slipper, have long been practically discarded as useless. Ladies' slipper, while officially recognized, is so little esteemed as a remedy that few text-books even mention it. Mitchella Compound is, in short, but one more of the innumerable cure-alls on the market in which discarded, unrecognized or useless drugs are pressed into service and invested with miraculous virtues. What shall be said of men who prey on pregnant women? Who create in the mind of the expectant mother the fear of untold agonies and then offer immunity to these suppositious tortures at the price of their worthless nostrums? Who, with the help of such publications as will accept their lying advertisements, do more to encourage abortion than even the professional abortionists themselves. There seems to be but one remedy: Speed the time when in their acceptance of advertising those publishers who fail to recognize decency as a moral obligation may be forced by public opinion to recognize its value as a business proposition.

Correspondence

The Optometrist and the School Child

To the Editor:—In The Journal, Jan. 30, 1909, page 402, comment is made on the Vermont optometry bill, in which optometry is defined as "the employment of any means other than the use of drugs for the treatment of the powers of vision and the adaptation of lenses for the aid thereof." It notes Vermont as the eleventh state recognizing and licensing optometry.

This involves a vital question and one phase of it is not yet grasped by the profession. Medical inspection of schools with examination of individual pupils is developing at a rapid rate and soon most school children will be examined with more or less regularly each year. All ophthalmologists recognize that it is impossible to make a satisfactory and scientific test of the refraction of a child without using a mydriatic, usually atropin. This, of course, ought to prevent the optometrists and opticians from prescribing lenses for children, but in actual practice this is not the case. As Gulick and Ayres show in their new book, "Medical Inspection of Schools," the physicians doing the work of school inspection are meagerly paid; hence usually young men with little experience are doing this most important work. Naturally as a class, not being especially trained in eye work, these men do not understand the necessity for the use of atropin in refraction and the importance of having this necessity stated on the notice which is sent to parents. The section on Ophthalmology of the American Medical Association ought to take this matter in hand. In the above-mentioned book the use of atropin is not touched on.

The practice of school inspection in most cities is that the child is referred to the family physician for advice as to the defects found, which includes eye conditions. From 30 to 40 per cent. of all children have errors of refraction. The result is that often the parents take the child directly to an optician or possibly do so with the approval of the family physician, for many of the profession as yet do not realize the need of atropin. I know of one optician who advertises that he is especially well prepared to care for children's eyes. Only one city that I know of has attempted to combat this evil; this is Philadelphia, where the reference notice advises that the child be taken for examination to a "competent oculist (not optician)."

Would it not be a good plan for the Section on Ophthalmology to adopt resolutions covering this matter, to be transmitted to all county medical societies, and by them brought to the attention of educational and health authorities who have this matter in hand? School inspection as usually practiced at present is playing directly into the hands of the optometrist and the child suffers. As to expense, the use of atropin in the original examination would lessen much the necessity for frequent re-examinations and expensive changes of lenses. The notice sent to parents as to eye troubles should state positively that a proper examination can only be made with the use of drops, *i. e.*, atropin, and that this can be done only by a physician as distinguished from an "eye doctor." This latter term is used in some notices sent to parents. The average refracting optician loves to have the public consider him as an "eye doctor," and, in fact, he often is.

Medical literature to-day is full of articles on glaucoma, lens extraction, etc.; but of the much more common everyday work of refraction and especially of the necessity for the use of atropin in childhood, practically nothing is said. When the surgeons a few years ago found that operation was the proper treatment for appendicitis they talked and wrote us deaf, dumb and blind on the subject, but they accomplished their object. Both the profession and the public to-day recognize surgery as the proper treatment for appendicitis. Is it not time that the ophthalmologist begin a similar campaign of education as to the absolute necessity for the use of atropin in determining the refraction of the eyes of school children? Is it not our own fault that so many people believe in the work of opticians and have enabled them to secure laws by which they practically are given the legal right to practice one branch of medicine?

In the work of school inspection, reports as to efficiency or retardation of pupils should be arranged to divide those pupils having eye defects into two classes. One group would be those who have had the refraction measured with the help of atropin and are wearing the lenses prescribed after such examination, and the other group those who have had the refraction tested without a mydriatic. Such comparisons would probably be most interesting.

I should like to hear the opinions of others, and especially of ophthalmologists who either through school work or otherwise, are coming into contact with this question.

FREDERICK J. MANN, M.D., Poughkeepsie, N. Y.
Assistant Surgeon, Manhattan Eye and Ear Hospital, New York City.

Prophylactic Effect of Antitoxin on the Child in Utero

To the Editor:—The case of "Prophylactic Effect of Antitoxin on the Child *in Utero*," reported by Dr. David R. Ransom in THE JOURNAL, Feb. 13, 1909, page 556, does not prove that the child received its immunity *in utero*, inasmuch as the child was nursed by its mother while she yet suffered from the diphtheria. My meaning is illustrated by the following cases:

Mrs. A. and Mrs. B. were both nursing young babes. Both women became infected with diphtheria, having fairly severe cases. I administered antitoxin to both mothers, and allowed the babies to nurse as usual, taking no precautions, except to caution the mothers not to kiss the babies or to cough near them, etc. In neither case did the infant become infected. My conclusions were, that the babies received immunity through the mothers' milk, probably partly by means of antitoxin administered to the mothers and partly through the antibodies, which without doubt could find their way into the lacteal secretion. I have had no opportunity to study the matter beyond the two cases cited, but I have no doubt others have had similar experiences.

IRVIN HARDY, M.D., F.S.Sc.Lond.
180 Alfred Street, Kingston, Ont.

To the Editor:—In connection with the report by Dr. Ransom, the following may be of interest:

J. C., male, colored, contracted smallpox, the characteristic eruption appearing Dec. 31, 1908, three days after the onset of the usual initial symptoms. His family consisted of a 3-year-old son and the wife, who was pregnant at term. The wife and child were at once successfully vaccinated and did not contract smallpox. The woman was delivered Jan. 11, 1909, eleven days after the appearance of the eruption in the husband, who, at this time still had a few crusts. The parents refused to have the baby vaccinated, but it did not contract the disease, although no precautions were taken to prevent contact with the father; the entire family lived principally in one room.

There can be no doubt about the identity of the disease, as the symptoms and eruption were typical, and other cases have developed here, which, though mild, are unquestionably smallpox.

It seems possible that the child may have been protected by the vaccination of the mother, *i. e.*, it may have acquired vaccinia *in utero* in the way that variola is sometimes thus acquired. C. S. NEER, M.D., Vinita, Okla.

Immunity Against Tuberculosis in General Paresis

To the Editor:—In THE JOURNAL, Feb. 13, 1909, Dr. A. J. Rosanoff, in his article on "Immunity Against Tuberculosis in General Paresis," endeavors to establish the fact that syphilis, the great causative factor in general paresis, establishes an immunity against tuberculosis.

I do not think that this can be substantiated by the facts; the immunity apparent from his statistics is in my opinion undoubtedly due to the antisyphilitic treatment to which, in the past, these patients have been subjected.

Many good authorities now think that general paresis is more directly due to the use of overdoses of mercury rather than to syphilis itself, which is a further argument for the drug origin of the immunity which Dr. Rosanoff would ascribe to syphilis. He asks: "How would the course of a case of tuberculosis be affected by a superadded syphilitic infection?"

From my own experience I answer: most disastrously, unless the patient be given antisyphilitic treatment (mercury) in which cases many cures have been reported in this country and abroad. B. L. WRIGHT, Surgeon U. S. Navy.

Book Notices

A STUDY OF THE OCULAR MANIFESTATIONS OF SYSTEMIC GONORRHEA, with Reports of Cases of this Nature. By W. Gordon M. Byers, M.D., Assistant Oculist, Royal Victoria Hospital. (Studies from the Royal Victoria Hospital, Montreal.) Vol. II, No. 2. (Ophthalmology 2.) February, 1908. Paper. Pp. 131. Montreal: The Herald Press.

The advanced conception of systemic gonorrhea is related to the eye in two ways: 1. While the urethra is commonly the port of entry for the gonococci, it has been shown that the conjunctiva may also serve as a point at which these organisms enter the system. 2. By metastasis the eye may be the seat of gonorrheal affections. Byers has searched the literature to gather all that has been written on the subject of gonorrheal ocular metastases and to sift the good from this material. He has added a number of cases of his own. He confesses to a certain element of disappointment at not being able to reconcile completely the conflicting opinions. He has, however, pointed out some errors and has reached conclusions which, he believes will eventually prove to be correct. The chief of these are as follows: Systemic *gonorrhea most commonly follows infection of the posterior urethra* in males, through a peculiar susceptibility, the causal factors of which are not known. The evidence shows that the gonococci and not toxins or other organisms are responsible for local manifestations.

Gonorrheal metastatic ocular inflammations are irregular in time, extent and severity, and are closely associated with metastases in other parts of the body. They show a marked tendency to relapse and to recur with fresh gonorrheas. They are frequently the first, and sometimes the only, expression of systemic gonorrhea. Patients with systemic gonorrhea *should be treated as those suffering from an infectious disease*, and excessive use of the eyes should be avoided as favoring local manifestations.

Metastatic gonorrheal conjunctivitis is frequently initial, usually bilateral, complicated by deep-seated disease in one-third of the cases. It resembles the acute catarrhal affection, with slight, mucoid discharge. Keratitis is usually multiple, *superficial, symmetrical and central*. Deep-seated *congestion* shows interior inflammation. Pure scleroconjunctivitis should be classed by itself. In iritis the inflammation extends to the adjacent uveal tract, so that the term "iridocyclitis" would express the condition better. Although especially affecting the vascular structure, the frequency of affection of the various structures of the globe is undetermined. Gonorrheal *affections of the uveal tract tend to be bilateral in first attacks*, and to recur unilaterally with fresh gonorrheas. They are marked by no special features. Swellings in the iris are never observed. An associate metastatic conjunctivitis is suggestive. Purulent forms show an extraordinary tendency o recovery. Metastatic affections of the optic nerve and ina form a diffuse neuroretinitis, bilateral when uncom- ated, but unilateral if combined with uveal disease. The od vessels are probably the route of infection. The prognosis, though guarded, is generally good. Dacryoadenitis from direct extension is unilateral and suppurates; that due to metastasis is bilateral and ends in resolution. The number of cases reported (92) and the extent of the literature referred to, impress one with the importance of a little regarded phase of this important subject.

SYPHILIS UND NERVENSYSTEM. NEUNZEHN VORLESUNGEN FÜR PRAKTISCHE AERZTE, NEUROLOGEN UND SYPHILIDOLOGEN. Von Max Nonne, Oberarzt am allgemeinen Krankenhaus Hamburg-Eppendorf. Second Edition. Paper. Pp. 699, with illustrations. Price, $4.80. Berlin: Verlag von S. Karger, 1909.

The first edition of this work, published in 1901, was based on lectures given by Dr. Nonne for the previous three years. The second edition is greatly enlarged and extended and brought well up to date. The form of lectures is retained. The attempt is made to base the clinical symptomatology on pathologic anatomy, but the conception of the work is a practical one, and the various subjects are illustrated largely from Nonne's own experience. Much attention is given to differential diagnosis, and the last chapter contains a review of the present status of the Wassermann reaction and other new methods of diagnosis. Considerable conservatism is shown in estimating the value of the Wassermann reaction, and the opinion is expressed that it is not pathognomonic, but must take its place among other symptoms as having diagnostic value, but as leading to reliable conclusions only when considered in connection with the entire clinical picture. All in all, the book must be regarded as a fitting exposition of the extensive relations between syphilis and diseases of the nervous system, which modern investigation has shown to exist.

HUMAN FOODS AND THEIR NUTRITIVE VALUE. By Harry Snyder, B.S., Professor of Agricultural Chemistry, University of Minnesota. Cloth. Pp. 362, with illustrations. Price, $1.25. New York: The Macmillan Co., 1908.

This book was written as a *text-book for students* in agricultural colleges; it is admirably fitted *to* their needs and the needs of laymen generally. Medical men and students will also find it interesting and instructive. It discusses neither the physiology of digestion nor diet in disease—subjects usually dealt with by physicians who write about foods and their values. In the first fourteen chapters the various *kinds of foods* and *condiments* and their composition are *dealt with*. The digestibility of foods, their comparative cost and value, rational feeding, water and food as affected by household sanitation and storage are in turn subjects of discussion. At the end of the book is a useful chapter *describing* various laboratory tests by which the composition of food and impurities or adulterations may be ascertained. The laboratory *work here detailed* is a valuable *part of the* course which this text-book covers.

THE NATIONAL STANDARD DISPENSATORY. Containing the Natural History, Chemistry, Pharmacy, Actions and Uses of Medicines, including those recognized in the *Pharmacopeias of the* United States, Great Britain and Germany, *with many references to other foreign pharmacopeias*. In Accordance with the Eighth Decennial Revision of the U. S. Pharmacopeia, by authorization of the Convention. By Hobart Amory Hare, B.Sc., M.D., Professor of Therapeutics *and Materia Medica in* Jefferson Medical College, Philadelphia; Charles Caspari, Jr., Ph.G., Pharm.D., *Professor of* Theoretical and Applied Pharmacy in the Maryland College of Pharmacy, Baltimore; and Henry H. Rushby, M.D., Professor of Botany *and Materia Medica in the College* of Pharmacy of the City of New York; with valuable assistance from Edward Kremers, Ph.D., Daniel Base, Ph.D., and Joseph F. Geisler, Ph.C., 2nd Revised Edition. Cloth. Pp. 2050, with illustrations. *Price*, $6.00. Philadelphia: Lea & Febiger, 1909.

The esteem in which the National Dispensatory has been *held* for many years will be even increased by an examination of the second edition. Everything possible seems to have been done to produce a one-volume encyclopedia *of* materia medica and therapeutics, suitable for the use of the medical practitioner. The volume embraces a description of the drugs and preparations of the Pharmacopeia and National Formulary and the principal non-official remedies, including the synthetics. The text of the Food and Drugs *Act is given*, together with the principal regulations and decisions under it. The formulas of the National Formulary in an abstracted form are introduced in the appendix. Minor drugs of local importance are described. In connection with antitoxin a good account of Ehrlich's side-chain theory is given.

THE BABY. By Daniel Rollins Brown, A.B., M.D. Cloth. Pp. 200. Price, $1. Boston: Whitcomb & Barrows.

It is stated in the preface that as *many* disorders of infancy are directly *due to mismanagement*, this little book is written for the guidance of the mother or nurse. The province of the physician is not encroached on, as Dr. Brown believes that in medicine especially a "little knowledge is a dangerous thing." The feeding of *infants* is *given* special *attention, and considerable* space is *devoted to* home modification of milk. At the same time attention is directed to the fact that even absolutely normal infants can not be fed by rule, and that special formulas *are needed in many* cases. Simple home remedies are *given* for bruises, falls, earache, etc.

ATLAS UND GRUNDRISS DER TOPOGRAPHISCHEN UND ANGEWANDTEN ANATOMIE. (*Lehmann's Medizinische Atlanten, I.*) *Von* Oskar Schultze, Professor der Anatomie in Wurzburg. Cloth. *Pp.* 224, with illustrations. Price, 16 marks. Munchen: J. F. Lehmann's *Verlag*, 1909.

An atlas must be judged by its illustrations, *and from* this point of view the "Atlas of Topographical Anatomy" by Schultze leaves little to be desired. The pictures are singularly clear, and in addition to the twenty-two colored plates, *a large part of the illustrations incorporated in the* text are also colored. The names of the various structures are given in Latin and are printed at the sides of the plates, with dotted lines leading to the part designated. The descriptive text, which is in German, is clear and concise, and to each section is appended *the* applications *to medicine* and surgery. The volume covers the anatomy of the entire body from a topographic point of view.

TUBERKULOSE-ARBEITEN AUS DEM KAISERLICHEN GESUNDHEITSAMTE. 8 Heft. Deutsche Heilstatten fur Lungenkranke. Geschichtliche und statistiche Mitteilungen. IV. Mit 8 Tafeln. Berichterstatter: Dr. Hamel, unter Mitwirkung von Dr. Friedr. Peters. Berlin: Verlag von Julius Springer, 1908.

This volume of the reports on tuberculosis put *out* by the German Imperial Health Office, continues the statistical review of the sanatoria of Germany and sums up the results in the concluding chapter. This summary covers the material available to the Health Office from 1896 to 1901, and includes data from over 21,000 patients.

Miscellany

The Physiology of Digestion a Century Ago.—Although some experimental work had been done on the stomach previous to the beginning of the nineteenth century, not much had been learned about the subject before the work of Dr. W. Beaumont on Alexis St. Martin in 1833. It is interesting to learn, however, that another American investigator had studied the subject of digestion experimentally thirty years before. LaFayette B. Mendel, in the *Popular Science Monthly*, February, 1909, gives an account of the thesis of Dr. John R. Young of Maryland (submitted June 8, 1803, to the medical faculty of the University of Pennsylvania), entitled "An Experimental Inquiry into the Principles of Nutrition and the Digestive Process." The example of Lavoisier incited Young to the use of the experimental method. He used frogs for the study of digestion, introducing small animals and other articles of food into the frog's stomach and removing them from time to time to observe the process. He also removed the digestive fluid from the stomach by means of a teaspoon, and made various experiments *in vitro* with it. Young was able to overthrow the theoretical assumptions of Cullen as to the nutrient principles of vegetables, which Cullen asserted to be derived from their acid, sugar and oil. Discarding the theory that acetous fermentation took place in the human stomach in a healthy state, he concluded that acescent vegetables afforded nourishment, not because of their acid, but by their sugar and oil. He found that the tissues of small animals when swallowed by the frog were softened and dissolved, even to the bones and the teeth. Vegetables were also submitted to experiments. He found that when peas, beans, wheat and bread, enclosed in linen bags, were introduced into the stomach, all these foods except the bread were still entire at the end of thirty hours; but that when the peas and beans were well bruised before introduction they were dissolved. He concluded that the living principle in the seeds resisted digestion. In harmony with this view he found that seeds would germinate when retained in the stomach. He cited an entertaining story from Morgagni of a young woman who, after a spell of violent vomiting, threw up a small plant, with perfect leaves and roots. He thought it probable "that the young lady had swallowed the seed of some small plant, without destroying its texture by mastication; which being retained in the stomach and exposed to heat and moisture, vegetation progressed." Previous teachers had assumed the occurrence of fermentation in the stomach. Young subjected this idea to experimentation. His friend, Mr. Mitchell, was made to take twelve ounces of sugar on an empty stomach, and after five hours this friend, having the power to ruminate, threw up the mass, which was sweet; "on being put to rest no intestine motion or disengagement of air was to be perceived." No vinous spirit could be obtained from it by distillation, and the subject of the experiment eructated no gas while the sugar was in the stomach, though the conditions were favorable to fermentation. Young therefore concluded against the occurrence of such a process during digestion. By other experiments he convinced himself of the non-occurrence of acetous fermentation and putrefaction in the stomach; and also of the acid character of the gastric fluid, though, his chemical tests being inadequate, he was led to conclude that the acid was phosphoric instead of hydrochloric. Our American experimenter attempted to apply to therapeutic purposes the knowledge gained, and having demonstrated that the gastric juice of the frog would dissolve urinary calculi, he proposed to employ it for that purpose by injecting it into the bladder. He says: "The fluid is easily procured and without the necessity, as in other animals, of sacrificing a life every time we wish to obtain it: by means of a teaspoon it is readily brought up from their stomachs" (where were the nostrum-makers of that day?) While leaving much of the process of digestion still obscure, the experiments of Young must be regarded as exhibiting decided progress in physiology. Notwithstanding his experimental demonstration, uncertainty regarding the acidity of the gastric juice still prevailed twenty years after Young's paper was published. Even as late as 1812 Montegre insisted that what was supposed to be gastric juice was nothing but swallowed saliva.

The Significance of Phagocytosis.—The theory of phagocytosis has played so prominent a part in recent discussions of the methods of immunity, that it seems unfortunate that it should be rendered improbable by some recent investigations. Baumgarten, in the *Münchener medizinische Wochenschrift*, July 14, 1908, expressed a regret that the interesting experimental results regarding the opsonins or bacteriotropic serum should turn the investigation of immunity into the channels of Metchnikoff's phagocytosis theory, which he regards as erroneous. While he does not deny that phagocytosis serves an important purpose in the organism by freeing it of bacteria, he concludes that the activity of the phagocytes is directed not against living bacteria capable of multiplication, but only against those which are dead or dying. The phagocytes are compared to the hyenas of the battlefield and not to the heroes of the fight. Even their power of digesting and detoxicating the dead bacteria should not, in Baumgarten's opinion, be overestimated. The organism possesses other means of accomplishing this purpose; and according to Baumgarten, investigations have shown that only a part of the bacteria are ingested by the phagocytes, while a greater part are destroyed and dissolved by the bacteriolytic powers of the serum. Hektoen, *Transactions of the Chicago Pathological Society*, Dec. 1, 1908, calls attention to the results obtained in his laboratory, which show the bactericidal effects of leucocytes *in vitro*, which appear to him to indicate that phagocytosis may be exerted against living bacteria. He calls attention to the work of G. F. Ruediger on the streptococcidal action of human leucocytes and human serum in which the presence of the leucocytes was shown to be necessary for the destruction of the bacteria. The work of E. C. Rosenow also shows that non-virulent pneumococci are destroyed by leucocytes in cooperation with serum, but not by leucocytes alone nor by serum alone. Hektoen's own experiments showed that defibrinated dog's blood destroyed virulent anthrax bacilli, which grew freely in normal dog serum and in suspensions of dog blood corpuscles freed from serum. It is to be noted, however, that the results obtained by Ruediger and by Rosenow are applicable only to non-virulent or mildly virulent streptococci and pneumococci. There is no evidence, according to Hektoen, that streptococci and pneumococci are seriously injured by human serum, in which they multiply freely; and the same is true of anthrax bacilli with regard to dog serum. Baumgarten's objections to the phagocytosis theory should be carefully considered; but it is evident from the work of Hektoen and his assistants that they are not universally applicable.

The Weighting Treatment (Belastungslagerung) in Gynecology.—The technic of the Pincus "weighting" (*Belastungslagerung*) method of treatment of gynecologic disorders, to which numerous references have been made in recent literature, as described by its originator, Pincus, in his monograph published in 1905, is substantially as follows: The essential features are the use of the inclined plane with moderate elevation of the pelvis and lower extremities and the use of compression in its various forms, abdominal, intravaginal, intermittent, continuous, direct (by application of weight or pressure in various ways) and indirect (through the tension of the internal pelvic and abdominal organs). The inclination of the plane is never as great as in the so-called "Trendelenburg position," and differs from it, moreover, in the extended position of the lower extremities. The slope can be easily arranged in private practice by raising the foot of the couch by blocks or bricks, beginning with an elevation of 8 to 16 centimeters and more according to the need. The head must be raised, best by a horsehair or air pillow, and this must also slightly raise the shoulders so as to avoid bending the neck in such a way as to hinder free circulation of blood. It is also important to remember that many nervous patients can rest easily only when the elbows and upper arm are supported in a comfortable position. Usually 20 to 35 centimeters' elevation is sufficient; the higher elevation may be useful for brief periods, but is generally needless and may cause headache, cramps, etc. During the night hours the foot of the couch should not be raised more than 25 centimeters. When the patients suffer from varicose veins and cramps in the legs, bandages (changed daily) may be used, but only after the blood has been emptied by raising the limbs. It is absolutely necessary to give careful attention to the condition of the skin of the thigh and avoid irritation. The second essential factor is the compression. Here we must distinguish two forms: the abdominal and the intravaginal, either of which may be continuous or intermittent. Abdominal compression may be made with shot bags (weighing from 1 to 5 kilos) or with moist clay poultices (2 to 5 kilos). Many patients prefer the latter, which covers easily a larger surface and offers the additional advantage of the effects of the moisture and some possible chemical irritation of the skin. Sand bags and other appliances have also been employed. For intravaginal compression he has made extensive use of iodoform gauze bags, somewhat larger than the lumen of the vagina, which are introduced with the patient on the inclined plane, the bowels and bladder having been previously emptied. Then 500 to 800 grams of shot are introduced, while the speculum is slowly withdrawn; the bag is then tied and pushed in, only the string being left outside. It is important in the treatment that the compression be applied gradually and also removed gradually; and this Pincus accomplishes with his quicksilver air colpeurynter, connected with a graduated glass bulb, by means of which mercury, in amount from 500 grams to 1,200 grams, can be gradually introduced while the patient is on the inclined plane, the bladder and rectum being empty, and so gradually withdrawn, while the colpeurynter bag can then be dilated with air (care being taken to avoid dangerous overdistention) and detached from the bulb when used in the ambulant treatment. The colpeurynter bag may be made cup-shaped or heart-shaped to fit the os uteri and prevent its misplacement by the latter when hypertrophied. Full details of the treatment are given in the monograph, which is profusely illustrated. The application of the vaginal tampon (*Staffeltamponade*), which in some cases is more satisfactory than the colpeurynter, is also described. The compression, abdominal and intravaginal, should be continuous in chronic conditions, if the patient is free from pain or fever. If these occur it should be intermittent. There is no fixed rule for the treatment of all cases, aside from the use of the inclined plane and the compression in its various forms. Various other gynecologic adjuvants, massage, hot irrigations, baths of various kinds, etc., may prove useful. While compression alone without the use of the inclined plane may be in many cases ineffective, the latter is by itself a valuable therapeutic measure. It quickens the circulation, both in the blood vessels and the lymphatics of the affected regions, and reduces the venous pressure in the most efficient way. It also produces a passive autotransfusion which, distinguished from the more active process induced by simultaneous compression, is often of benefit. It is from the direct intravaginal compression, however, that the greatest therapeutic effects are obtained, and the mercury colpeurynter is more effective than the other methods. As complementary measures, Pincus mentions at some length systematic respiratory exercises and carefully regulated nutrition, with due attention to the excretions, etc. The weighting treatment is more especially of value when the organs have fixed adhesions to the bony structures or other fixed points, while gynecologic massage is more especially useful when movable organs are adherent to each other. The weighting treatment loosens up bandlike adhesions and softens indurated edemas, making subsequent massage more effective, and it is further facilitated by the inclined plane position.

Noma in a Wild Animal.—Noma is of interest on account of its comparative rarity and uncertain etiology. It is now generally regarded as being infectious, the most probable infective agent being the spirillum and fusiform bacillus of Vincent, which are regarded by several investigators as different forms of the same organism. It has been noted clinically that the disease begins as an ulcerative stomatitis. C. Y. White and J. D. Blackwood (Proceedings of the Pathological Society of Philadelphia, November, 1908) have had opportunity to observe the course of a case occurring in a monkey. They found fusiform bacilli and spiral micro-organisms resembling Vincent's spirillum in the exudate and scrapings of the diseased area, there being a larger number of spiral micro-organisms than are found in the normal monkey's mouth. The histologic examination showed the presence of rod-like and thread-like organisms similar to those described by Perthes, Bruning, and others in the diseased area, being especially located in the area of advancing disease. A spiral organism resembling Vincent's spirillum in conjunction with a fusiform bacillus is found in the normal monkey's mouth. Fusiform bacilli are frequently present in small numbers in the mouths of normal monkeys. Because of their failure to isolate and cultivate the organisms, White and Blackwood refrain from asserting that the bacteria present are the cause of noma, but merely call attention to the fact that their findings are similar to those reported in a corresponding condition in human beings by others who have advanced the theory that these micro-organisms are the cause of noma or other gangrenous processes of the mouth.

Chicks from Transplanted Ovaries.—C. C. Guthrie has removed ovaries from fowls, replacing them by transplanting ovaries from other fowls (THE JOURNAL A. M. A., Oct. 17, 1908, li, 1314) and found that fowls on which this operation had been performed at first lost weight, but that during the second year their weight approached the normal. He has since reported (*Quarterly Bulletin Medical Department of Washington University*, December, 1908) that the ovaries which have been transplanted seem to function in a normal manner. The color-markings of the resulting offspring appear to be influenced by the foster-mother.

Inoculation of Street Sweepers with Plague Prophylactic.—It is stated in the *British Medical Journal* that the health officer of Kurachi has induced all the street sweepers of that sea port to allow themselves to be inoculated with Haffkine's plague prophylactic. The greater number, 1,114 out of a total of 1,206, were inoculated at the beginning of last season, and at the end of the season it was found that the mortality from plague among the uninoculated was eleven, and among the inoculated three.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

HIGH TEMPERATURE WITH RECOVERY

To the Editor:—Please state in THE JOURNAL the highest temperature on record with recovery of the patient. W. S. W.

ANSWER.—The highest temperature on record followed by recovery is probably the case reported by John W. Teale, in the Transactions of the Clinical Society, London (VIII, page 98), in which a temperature of 122 F. was reached more than once. The case was one of severe internal injury; the patient recovered. Temperatures of 112 and 114 F. with recovery have been observed several times. Cases presenting such remarkable temperatures should be observed critically, as some patients are able to deceive an unsuspecting observer by various tricks. Our correspondent will find of interest the article on fever in Quain's Dictionary of Medicine.

DESCENDANTS OF DR. JOHN C. NOTT

To the Editor:—Can any of your readers inform me of the whereabouts of any descendants of Dr. John C. Nott, who lived in New Orleans about 1861? He was professor of anatomy in the University of Louisiana, and author of "Types of Mankind."

1319 Locust St., Philadelphia. JOSEPH LEIDY.

ECHINACEA

To the Editor:—Kindly inform me as to the real properties of echinacea. J. C. ROBINSON, Cedar, Utah.

ANSWER.—Echinacea has been claimed to have anesthetic, sialagogue, antiseptic, diaphoretic, alterative and several other properties. Like many other discarded drugs, it has failed to sustain the reputation given it by enthusiasts years ago; it is now seldom prescribed under its own name. In common with numerous other little-used drugs, it is finding a place in proprietary mixtures, whose manufacturers make use of the early enthusiastic and unverified reports to endow their nostrums with remarkable therapeutic properties.

TRANSMISSION OF DISEASE BY COMMUNION CUPS

To the Editor:—Some time ago, when making a plea for the use of individual cups at communion services, I was challenged to cite specific instances in which disease was known to have been transmitted by the use of the single cup at this service. I was not able to do so. Can you or your readers furnish data?

F. E. Ross, M.D.

2012 Peach street, Erie, Pa.

SOLUTION TO DECOLORIZE TUBERCLE BACILLI

To the Editor:—Please publish the formula for Pappenheim's solution for decolorizing the tubercle bacillus. J. P. L.

Answer.—Pappenheim's solution consists of rosolic acid, 1 part, dissolved in absolute alcohol, 100 parts; methylene blue is added to the point of saturation, and to this is added glycerin 20 parts.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. army, week ending Feb. 20, 1909:

Truby, W. F., maj., order for duty at Army General Hospital, Fort Bayard, N. M., amended; will proceed to Fort Worden, Wash., for duty upon return from Cuba.

Reynolds, C. R., capt., relieved from duty as commanding officer, Co. C, H. C., to take effect upon the departure of that company for Fort Niagara, N. Y., about Mar. 15, and assigned to duty at the Army General Hospital, Washington, D. C.

Church, J. R., major, granted an extension of 14 days to his leave of absence.

Stedman, C. J., capt., honorably discharged from the army.

Manly, C. J., major, granted leave of absence for 10 days.

Pillsbury, H. C., lieut., relieved from duty on the transport *Buford* and assigned to duty on the transport *Logan*.

Schreiner, E. R., major, relieved from duty at the Army General Hospital, San Francisco, and ordered to Fort Walla Walla, Wash., for duty.

Vedder, E. B., capt., relieved from duty at Fort Walla Walla, Wash., and ordered to Fort Stevens, Oregon, for duty.

Love, A. G., lieut., arrived at San Francisco on the *Buford* and ordered to Columbus Barracks, Ohio, for duty.

Owen, L. J., capt., when relieved from duty at Columbus Barracks, Ohio, ordered to Fort Benjamin Harrison, Ind., for duty.

Cole, C. L., capt., when relieved from duty at Fort Benjamin Harrison, Ind., ordered to return to proper station, Fort Thomas, Ky.

Johnson, C. W., M. R. C., granted leave of absence for two months.

Stallman, G. P., M. R. C., relieved from duty in the P. D.; ordered to sail April 15 for San Francisco for orders.

Bayley, E. W., Ballard J. C., and Dade, W. H., M. R. C., relieved from duty at their present stations and ordered to duty in the P. D., sailing March 5, from San Francisco.

Hadra, Frederick, M. R. C., arrived at San Francisco on the *Buford* and ordered home to await further orders.

Bowman, M. H., M. R. C., arrived at San Francisco on the *Buford* and ordered to duty at the Depot of Recruits and Casuals, Angel Island, Cal.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ending Feb. 20, 1909:

Balch, A. W., P. A. surgeon, resignation accepted to take effect Feb. 20, 1909.

Stokes, C. F., surgeon, detached from the bureau of medicine and surgery, Navy Department, and ordered to the Naval Academy, Annapolis, Md.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Feb. 19, 1909:

SMALLPOX—UNITED STATES

California: Sacramento, Nov. 1-Dec. 31, 24 cases; Los Angeles, Jan. 23-30, 1 case

Illinois: Cairo, Jan. 30-Feb. 6, 57 cases; Chicago, 2 cases; Palmyra, Dec. 25-Jan. 20, 4 cases; West Frankfort, Dec. 12-Feb. 13, 15 cases.

Indiana: Elkhart, Jan. 30-Feb. 6, 1 case; Evansville, 1 case; Fort Wayne, Jan. 23-Feb. 6, 3 cases; Indianapolis, Jan. 31-Feb. 7, 1 case; Marion, 5 cases.

Iowa: Burlington, Jan. 1-31, 1 case, imported.

Kentucky: Covington, Jan. 30-Feb. 6, 3 cases; Lexington, 5 cases.

Louisiana: New Orleans, Jan. 30-Feb. 6, 3 cases.

Maryland: Baltimore, Jan. 30-Feb. 6, 1 case.

Massachusetts: New Bedford, Jan. 30-Feb. 6, 1 case.

Missouri: Kansas City, Jan. 30-Feb. 6, 2 cases; St. Louis, Jan. 30-Feb. 2, 3 cases.

New York: Rome, Jan. 1-31, 1 case.

Ohio: Cincinnati, Jan. 29-Feb. 5, 15 cases; Dayton, Jan. 30-Feb. 6, 1 case.

South Dakota: Aberdeen, Dec. 14-Feb. 12, 40 cases.

Tennessee: Knoxville, Jan. 30-Feb. 6, 1 case; Nashville, 2 cases.

Texas: Denton county, Jan. 1-Feb. 8, 5 cases; San Antonio, Jan. 30-Feb. 6, 8 cases.

Vermont: White River Junction, Jan. 2-Feb. 10, 3 cases.

Virginia: Port Royal, Dec. 27-Jan. 14, 3 cases.

Washington: Spokane, Jan. 16-30, 4 cases, 2 imported.

West Virginia: Weston, Feb. 1, 1 case, imported.

Wisconsin: LaCrosse, Jan. 30-Feb. 6, 6 cases; Milwaukee, 7 cases.

SMALLPOX—INSULAR

Philippine Islands: Manila, Jan. 2-9, 5 cases, 3 deaths.

SMALLPOX—FOREIGN

Brazil: Bahia, Dec. 5-26, 121 cases, 10 deaths; Pernambuco, Dec. 1-31, 24 deaths.

Canada: Halifax, Jan. 23-30, 4 cases; Yarmouth and vicinity, Jan. 1-Feb. 13, 28 cases.

China: Shanghai, Dec. 19-26, present.

Egypt, Alexandria, Dec. 24-31, 2 deaths; Cairo, Dec. 31-Jan. 7, 16 cases, 9 deaths.

Formosa: Dec. 12-26, 3 cases.

Great Britain: Bristol, Jan. 16-23, 2 cases, 1 death.

India: Bombay, Jan. 5-12, 7 deaths; Calcutta, Dec. 19-Jan. 2, 61 deaths; Rangoon, Dec. 26-Jan. 2, 1 death.

Indo-China: Saigon, Dec. 19-26, 1 case, 1 death.

Italy: General, Jan. 18-24, 47 cases; Calabria, Jan. 21, 15 cases; Genoa, Jan. 1-15, 2 cases; Naples, Jan. 18-24, 20 cases.

Java: Batavia, Dec. 26-Jan. 2, 2 cases.

Mexico: Mexico City, Dec. 12-26, 10 deaths; Monterey, Jan. 24-31, 3 deaths.

New Foundland: St. John's, Jan. 31-Feb. 6, 1 case; South Coast, Feb. 6, epidemic.

Peru: Lima, Dec. 31, 6 cases.

Portugal: Lisbon, Jan. 23-30, 5 cases, 1 imported.

Russia: Moscow, Jan. 2-16, 22 cases, 15 deaths; Odessa, Jan. 1-16, 6 cases, 2 deaths; St. Petersburg, Dec. 28-Jan. 9, 13 cases, 7 deaths; Warsaw, Dec. 5-19, 6 deaths.

South Africa: Capetown, Dec. 23-Jan. 2, 4 cases.

Spain: Barcelona, Dec. 19-Jan. 9, 4 deaths; Jan. 16-23, 1 death; Valencia, Jan. 19-23, 10 cases; Viga, Jan. 9-16, 1 death.

Turkey: Constantinople, Jan. 10-24, 8 cases; Smyrna, Oct. 5-Dec. 31, 53 deaths.

YELLOW FEVER

Brazil: Bahia, Dec. 5-Jan. 2, 18 cases, 8 deaths; Para, Jan. 9-16, 4 cases, 4 deaths.

Columbia: Cartagena, Jan. 7-14, 1 case, 1 death.

Ecuador: Guayaquil, Jan. 9-16, 1 death.

Mexico: Maxcanu, vicinity, Jan. 23-30, 1 case; Merida, 1 case; Veracruz, Jan. 23-2, 1 case, 1 death.

Trinidad: Jan. 16-23, 1 case, 1 death.

CHOLERA—INSULAR

Philippine Islands: Manila, Dec. 19-Jan. 2, 4 cases, 1 death; Provinces, Dec. 19-Jan. 9, 864 cases, 556 deaths.

Russia: General, Dec. 31-Jan. 7, 111 cases, 47 deaths; Jan. 12-24, 342 cases, 125 deaths; Helsingfors, vicinity, Jan. 10, 1 case; St. Petersburg, Dec. 31-Jan. 7, 96 cases, 40 deaths.

Straits Settlements: Singapore, Dec. 5-12, 11 deaths.

PLAGUE

Brazil: Bahia, Dec. 5-Jan. 2, 9 cases, 5 deaths; Pernambuco, Dec. 1-31, 4 deaths.

Egypt: General, Jan. 14-21, 3 cases, 2 deaths.

Formosa: Jan. 1-9, 1 case, 1 death.

India: General, Dec. 26-Jan. 2, 1,793 cases, 1,431 deaths; Bombay, Jan. 5-12, 9 deaths; Calcutta, Dec. 19-Jan. 2, 13 deaths; Rangoon, Dec. 26-Jan. 2, 1 death.

Indo-China: Saigon, Dec. 19-26, 4 cases, 3 deaths.

Turkey: Bagdad, Jan. 2, 3 cases.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the fourteen days ended Feb. 17, 1909:

von Ezdorf, R. H., P. A. surgeon, granted 28 days' leave of absence from Feb. 26, 1909.

Ramus, Carl, P. A. surgeon, granted 1 day's leave of absence, Jan. 21, 1909, under paragraph 191, Service Regulations.

Ramus, Carl, P. A. surgeon, granted 3 days' leave of absence from Feb. 5, 1909, on account of sickness.

Bahrenburg, L. P. H., P. A. surgeon, granted 2 days' leave of absence from Jan. 29, 1909, under paragraph 191, Service Regulations.

Robertson, H. M., P. A. surgeon, granted 4 days' leave of absence from Feb. 23, 1909.

Collins, G. L., P. A. surgeon, granted 1 day's leave of absence, Feb. 4, 1909, under paragraph 189, Service Regulations.

Herring, R. A., asst. surgeon, granted 6 days' leave of absence from Feb. 11, 1909, under paragraph 191, Service Regulations.

Stiles, Ch. W., chief division zoology, Hygienic Laboratory, granted 1 day's leave of absence, March 16, 1909, and 6 days' leave of absence from April 5, 1909.

Branham, Henry G., acting asst. surgeon, granted 3 days' leave of absence from Feb. 9, 1909, without pay.

Dynan, Nicholas J., acting asst. surgeon, granted 29 days' extension of annual leave on account of sickness from Dec. 3, 1908, and a further extension of leave on account of sickness for 30 days from Jan. 1, 1909.

Goldsborough, B. W., acting asst. surgeon, granted 30 days' leave of absence from Jan. 1, 1909, with pay, and 2 days' leave of absence from Feb. 1, 1909, without pay.

Gustetter, A. L., acting asst. surgeon, granted 15 days' leave of absence from Feb. 6, 1909.

MacCaffey, W. B., acting asst. surgeon, granted 2 days' leave of absence under paragraph 191, Service Regulations.

Markoe, W. W., acting asst. surgeon, granted 30 days' leave of absence from Jan. 1, 1909.

Torres, Julio F., acting asst. surgeon, granted 15 days' leave of absence from Feb. 14, 1909.

Association News

An Appeal for Contributions to Aid Mrs. Carroll

At the Conference on Medical Legislation held in Washington, D. C., Jan. 18-20, 1909, resolutions were adopted providing for a committee composed of one member each from the medical departments of the Army and the Navy, one from the United States Public Health and Marine-Hospital Service, one member from the District of Columbia and one member from the Council on Medical Legislation, to present to the medical profession the conditions under which the widow of Major James Carroll is now placed, and to devise such plans as might seem advisable for her relief. The following committee was appointed: Major M. W. Ireland, U. S. A., Surgeon W. H. Bell, U. S. N., Dr. John F. Anderson, U. S. Public Health and Marine-Hospital Service, Dr. John D. Thomas, Washington, D. C., and Dr. A. S. von Mansfelde of Ashland, Neb.

Mrs. Carroll has been granted a pension of $125 a month on which to support herself, seven young children and the aged mother of her husband. The house which Major Carroll had partly paid for is mortgaged for $5,000. Since the conference adjourned the medical officers of the Army have raised enough to pay the taxes on the house, one monthly note of $50 and the overdue interest on the first mortgage, amounting to $125. Believing that the members of the medical profession will wish to contribute toward a fund for the purpose of paying the balance due on the house, the committee requests contributions of any amount: they may be sent to Major M. W. Ireland, United States Army, Washington, D. C.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

CONFERENCE ON LEGISLATION

Annual Conference of the Committee on Medical Legislation and the National Legislative Council

The annual conference on medical legislation of the American Medical Association was held at the New Willard Hotel, Washington, D. C., January 18-20, 1909. The Monday session was called to order at 10 a. m., with Dr. Charles A. L. Reed, Cincinnati, in the chair.

Organization was effec[illegible] by electing Dr. Charles A. L. Reed, Cincinnati, chairman, and Dr. C. S. Bacon, Chicago, vice-chairman. Roll-call showed twenty members present. As an appointment had been made to meet the House Committee on Interstate and Foreign Commerce at 3 p. m., the Public Health and Marine-Hospital Service bills were first taken up. After discussion the conference endorsed S. B. 6102, provided it should be amended by reinserting the provision contained in the original Senate bill creating a bureau of water-supplies and sewage: by the insertion of a clause empowering the Surgeon-General of the Public Health and Marine-Hospital Service to enforce necessary measures for the protection of streams and water-ways from contamination and by the addition of a section authorizing the President to issue an executive order transferring and reassembling into a single department the various existing national public health agencies. S. B. 6101, the Public Health and Marine-Hospital Service Personnel Bill, was also endorsed.

The reports from the various states and services were then taken up, each representative reporting the present condition of medical legislation in his state. The conference then adjourned until 9 o'clock Tuesday morning.

NATIONAL LEGISLATION

On Tuesday, Dr. Reed, in his chairman's report, emphasized the importance of a naval medical reserve corps and the necessity of national regu[illegible]tion of public health. The secretary's report covered the wo[illegible] of the committee and the Bureau of Medical Legislation for the past year, especially the accumulation of data relating to the uniform regulation of the practice of medicine; the work on vital statistics legislation in conjunction with the United States Census Bureau and the American Public Health Association and the prospects for uniform pure food legislation.

The Committee on Navy Medical Reorganization reported, approving the bills establishing a corps of dental surgeons, authorizing a naval medical reserve corps similar to that provided for the U. S. Army and providing for the purchase and construction of hospital ships. The Committee on Special National Legislation reported the passage of the Carroll-Lazear Pension Bill.

STATE LEGISLATION

Following adjournment at 12, the conference reassembled at 2 p. m. in joint conference with the Committee on Uniform State Legislation of the Association of State and National Food and Dairy Departments. Mr. R. M. Allen of the Department of Justice delivered an address on uniform state legislation, followed by Dr. W. D. Bigelow of the Bureau of Chemistry of the Department of Agriculture. After a general discussion on the subject, the report of the Committee on Uniform State Legislation on Food and Drugs was adopted, recommending the endorsement of the model bill drafted by the committee of the Association of State and National Food and Dairy Departments.

The discussion of the report of the Committee on Uniform State Laws on Vital Statistics was opened by Dr. Cressy L. Wilbur of the Bureau of the Census, followed by a general discussion and a report of the efforts being made to secure the adoption of the model bill in the non-registration states. Following the report of the Special Committee on Revision of the Tariff, the Conference adjourned until Wednesday morning.

On Wednesday, following a general discussion of the national Food and Drugs Act and its enforcement, reports were made by the Committee on Uniform Regulation of the Practice of Medicine, the special committee for the relief of Dr. Carroll's widow, the special committee on expert medical testimony and the Committee on Federal and State Regulation of Public Health. Dr. George W. Gay of Boston presented resolutions regarding optometry which were unanimously adopted. After further discussion of the report of the Committee on Revision of the Tariff, the Conference adjourned until 1 o'clock, at which time the report of the Committee on Conclusions and Plans of Action was presented.

REPORT OF THE COMMITTEE ON CONCLUSIONS AND PLANS OF ACTION

This report endorsed S. B. 6101 and S. B. 6102, enlarging the power and authority of the Public Health and Marine-Hospital Service and providing for its personnel; endorsed the three bills relating to naval medical reorganization; recommended that the Bureau of Medical Legislation through the columns of THE JOURNAL and the *Bulletin* inform the medical profession that the United States Public Health and Marine-Hospital Service tests all vaccine matter used in interstate commerce; endorsed H. R. 24613, for the relief of the widow of Dr. William R. Miller; endorsed the work of the Bureau of Medical Legislation in securing data on which to base a uniform medical practice act; instructed the Bureau of Medical Legislation to continue its work for the adoption of a uniform vital statistic bill and expressed the thanks of the Conference to Dr. Wilbur for his constant aid and cooperation; endorsed the report of the Committee on Uniform State Laws on Food and Drugs and extended the thanks of the Conference to Mr. Allen and Dr. Bigelow; endorsed the work of Dr. H. W. Wiley of the Bureau of Chemistry; endorsed the report of the Special Committee on Expert Medical Testimony, providing for the appointment of a special committee to draft a suitable law on this subject for presentation at the next session of the conference, and endorsed the following resolutions presented by Dr. Gay regarding optometry:

> *Whereas,* a class of opticians whose proper function consists in making and adjusting glasses as directed by an oculist, is actively seeking legislation in several states on a subject known as "optometry," legislation which will in effect give them the sanction of the state to examine eyes and to prescribe for the same, and

Whereas, the qualifications usually required in these petitions for such legislation are entirely inadequate to justify the state in conferring such important privileges upon any class of people, and

Whereas, the bills presented to the various legislatures for enactment will not prevent the so-called "optometrist" from practicing ophthalmology, one of the most important branches of medical work, and

Whereas, such action on the part of the state will tend to elevate a trade, devoid of the essential qualifications, to the dignity and importance of a profession in the minds of the public, and

Whereas, the result of such license will doubtless be to establish a class of uneducated and poorly qualified oculists, to the great detriment of the public health, now, therefore, be it

RESOLVED, that in the opinion of the Committee on Medical Legislation, and of the National Legislative Council of the American Medical Association in conference assembled, the granting of such a license to opticians will do great harm to the public by reason of the fact that it gives to persons, who are ignorant of the fundamental principles of diagnosis, ignorant of the profound relation that may exist between ocular fatigue and serious neurologic disturbances, as well as of the many deep-seated, intraocular affections of the eye, the sanction of the state in their attempts to do the work, which should only be done by properly educated and duly qualified physicians.

RESOLVED, that in the opinion of the American Medical Association, as represented by this conference, the efforts of the self-styled optometrists to obtain such legislation should be discouraged and opposed in every legitimate manner and on all proper occasions.

After the adoption of this report the conference adjourned. (A full report of the Conference with minutes of the session will appear in the March number of the *Bulletin of the American Medical Association.*)

Dr. McCormack Addresses Missouri and Kansas Legislatures

Dr. J. N. McCormack addressed the Missouri state legislature at Jefferson City February 18 by special invitation and the Kansas legislature February 23. Arrangements for other joint sessions are being made and similar addresses will probably be given before the legislatures of South Dakota and Iowa. In the first two weeks of February Dr. McCormack also spoke before joint sessions of the legislatures of North Carolina and Indiana. The fact that a joint resolution was adopted by the Missouri legislature asking for an address before a joint session is particularly interesting as showing the increasing attention given to public health measures by our state legislatures.

Proposed Medical Legislation

ILLINOIS

S. B. 67 is to provide "humane and scientific treatment and care for the dependent wards of the state; to provide delinquents and prisoners with such training as will restore the largest possible portion of them to useful citizenship; to study the causes of dependence and delinquence with a view to ultimate prevention, and to secure the highest attainable degree of economy in the business administration of state institutions." This bill, one of the most important introduced in the legislature for years, provides for centralized administration, inspection, criticism and recommendation. The administration of the twenty state charitable, correction and penal institutions is to be placed in the hands of a paid board of three men, while the inspection and criticism of the instituton is to be done by a non-salaried board of seven persons. The administrative board is to be appointed by the governor to serve during good behavior, each member to receive a salary of $7,500. One member must be experienced regarding the cure and treatment of insane, feeble-minded and epileptic, one member regarding charities and children and one member regarding the care and correction of delinquents and criminals. The board is to be authorized to employ a fiscal supervisor at a salary of $10,000 and expenses. All existing boards of trustees, managers and commissioners of the various institutions, at present numbering 72 persons, are abolished. The business management of all state institutions is to be centralized in one office with one purchasing agent for all. The fiscal supervisor and the managing officers of all the state institutions are to be constituted a board of joint estimate, to meet at least annually. This board is to elect a standing purchasing committee, of which the fiscal supervisor is to be a permanent member. The purchase of all supplies is to be by competitive bidding, the managing officer of each institution making monthly requisitions on the fiscal supervisor for all supplies, material, salaries, etc. The funds appropriated for state institutions are to be placed in the hands of the state treasurer, local treasurers being abolished. The board of administration, therefore, is not to handle a single dollar of actual money, all bills being paid by warrants on the state treasurer. The names of all state asylums are to be changed to "state hospital." Civil service reform rules are to be extended to all employés of all state institutions, including superintendents and wardens, and to all employés of the board of administration and the board of charities and correction, the fiscal supervisor being the only employé of the board of administration exempt. The present Board of Charities Act, the Complete State Care Act and the Prison Industries Act are to be repealed, being covered by the proposed arrangement.

This bill has been carefully drafted after the collection of expert opinions from authoritative sources in this country and Europe. It represents an earnest effort to take the management of state institutions of all kinds out of the hands of the professional politician and ringster, to substitute business management and economy for slipshod and irresponsible methods and to manage state business affairs as they would be managed by a private corporation, made up of capable and far-sighted business men. The only possible objections to the bill are those raised by ward politicians of the old school, who will doubtless object to having their patronage taken out of their hands.

INDIANA

H. B. 258 is to empower cities to pass ordinances regulating sewage systems. H. B. 308 is a most comprehensive bill, similar to the Nebraska bill, providing for the regulation of all places in which foods are prepared, manufactured, packed, stored, sold or distributed. H. B. 44 is to give the state board of health authority over all water-supplies, water-systems, sewage-systems, purification plans, etc., in the state.

MICHIGAN

The report of the Committee on Legislation of the Michigan State Medical Society shows that the bill providing for a board of examiners for nurses, introduced into the last legislature, will also be presented at the present session. The committee endorses the principles of the bill, but insists that the registration of nurses should be in the hands of the state board of medical registration rather than in the hands of a separate and independent board. An optometry bill has been introduced, but its passage is not anticipated.

MINNESOTA

H. F. 169, a bill to prohibit certain classes of medical advertising, which was referred to the Committee on Public Health, has been reported on favorably and passed by the house.

NEW HAMPSHIRE

H. B. 395 provides for the registration of all cases of tuberculosis and for the prevention of the spread of the disease. H. B. 425 is to regulate the manufacture and sale of cigarettes. H. B. 432 is to add to the existing definition of the practice of medicine "the public assumption or advertising of any title showing or tending to show that the person is a practitioner of medicine in one or more branches. Christian Scientists or other practitioners who claim to cure disease by prayer or mental treatment alone without the use of medicine and without performing any physical act whatever are exempt providing they do not ask or receive any money or other kind of value as compensation." H. B. 433 is to authorize physicians not regularly in attendance on patients to issue death certificates.

H. B. 446 is to amend the public health laws regarding sewage. H. B. 481 is to regulate the licensing and registration of physicians and H. B. 520 is to amend the food and drugs act of 1907.

NORTH CAROLINA

A bill has been introduced to amend the medical practice act by providing for "limited license," authorizing the holders thereof to practice medicine and surgery within the limits of a specific district, this being considered advisable on account of the sparsely settled condition of parts of the state. A bill has also been introduced providing for the registration of deaths in towns of over 1,000 population. Other bills provide for the distribution of diphtheria antitoxin to indigent persons, for the appropriation of $30,000 for a state sanatorium for tuberculosis and for the amendment and modification of existing laws regarding the state board of health, state board of medical examiners and the state laboratory of hygiene.

North Dakota

S. B. 131 is to create a state board of osteopathic examiners and is similar in general to the bills for this purpose introduced into other state legislatures.

South Dakota

S. B. 190 is to prohibit the advertising of the treatment of venereal diseases in any newspaper, pamphlet or circular. H. B. 217 is to establish a board of examiners in optometry and is similar to the bills along this line introduced into other states. H. B. 189 is a pure food bill. H. B. 282 is to amend the existing laws regarding county boards of health.

Tennessee

S. B. 177 is to regulate the practice of medicine and surgery and is a practically new medical practice act for the state. It provides for a state board of medical examiners of 6, 2 from each grand division of the state, 4 representatives from the "regular" school of medicine and 1 each from the eclectic and homeopathic. No member of the board shall be connected with any medical college or with the state board of health. Members of the board are to be appointed by the governor. Licenses issued by the board must be registered in the office of the county clerk. The board is given the power to revoke licenses for fraud or unprofessional or dishonorable conduct which is explicitly defined under seven heads. An amendment provides that nominations shall be made by the three state medical associations, each of which shall name twice as many names as are to be appointed, from which list the governor shall select his appointees.

Texas

S. B. 50 is to provide for the erection and maintenance of a state sanatorium for tuberculiesis. This bill has been reported on favorably by the committee on public health and has been advanced to third reading in the senate. An optometry bill introduced into the house is still in committee. A bill to exempt graduates of the medical department of the state university from examination has been reported favorably in the senate and unfavorably in the house; it probably will not pass. The bill creating a state board of health has been reported favorably in the senate.

Wisconsin

S. B. 74 is an optometry bill. S. B. 139 is to amend the housing act of the state. S. B. 85 is to provide for sanitary conditions in hotels. H. B. 56 is to amend the existing statutes regarding tuberculosis. H. B. 139 is to amend the existing law regarding vital statistics.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR

Bowling Green, Ky.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Seventh Month—Fourth Weekly Meeting

DYSTOCIA (Continued)

Due to Accidents and Diseases

Premature Separation of Normally Implanted Placenta—Etiology, pathology, indications in treatment.

Placenta Prævia—Frequency, varieties, diagnosis, differentiation.

Postpartum Hemorrhage.—ology: (1) Traumatic, lacerations of cervix, vagina, vu a. (2) Non-traumatic, (a) before partial separation of placenta and inefficient pains. its expulsion; (b) hemophili dyscrasia; (c) atony of uterus, (1) exhaustion from ng labor, (2) diseased muscle (metritis, fibroids, etc.), (3) excessive distention (twins, hydramnios), (4) anesthetic, (5) paralysis of placental site. Etiologic diagnosis, "concealed hemorrhage." *Treatment:* Physiologic and therapeutic action of ergot. Local treatment: Posture, stimulants, saline solution.

Inversion of Uterus.—Rarity, etiology, spontaneous and from violence. Treatment.

Adherent Placenta.

INJURIES TO BIRTH CANAL

Vulvar and Perineal Lacerations.—Prevention. Treatment; primary and secondary operations, results.

Lacerations of Cervix.—Frequency, extent, shape, location, dangers.

Rupture of Uterus.—(a) During pregnancy. (b) During labor; etiology and pathology; contraction ring, lower uterine segment; spontaneous, obstructed labor, malpresentations, hydrocephalus, *malformation of uterus; artificial* or violent, version, forceps; complete and incomplete rupture. Diagnosis. Prognosis, mother, child.

OBSTETRIC OPERATIONS

Technic Preparation for all operations.

Accouchement Forcé.—Indications. Methods: (1) Manual dilatation. (2) de Ribes' balloon. (3) Instrumental dilatation. (4) Deep cervical incisions. (5) Vaginal Cesarean section.

Forceps.—History of forceps. Indications and application in occipito-posterior positions.

Extraction.—Indications. Technic, manual method. Use of forceps, fillet, blunt hook.

Version.—1. Cephalic; indications, methods, technic. 2. Podalic; indications, conditions, technic of internal, of combined.

Monthly Meeting

Causes and Treatment of Postpartum Hemorrhage.
The Abuse of Forceps.
Indications for Cesarean Section.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Connecticut Homeopathic: New Haven, Mar. 9. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.
Connecticut Eclectic: New Haven, Mar. 9. Sec., Dr. T. S. Hodge, Torrington.
Connecticut Regular: New Haven, Mar. 9-10. Sec., Dr. Charles A. Tuttle, 196 York St.
Maine: Portland, Mar. 9-10. Dr. W. J. Maybury, Saco.
Massachusetts: Boston, Mar. 9-11. Sec., Dr. Edwin B. Harvey, Room 159, State House.

Higher Entrance Requirements at Western Reserve

Since October, 1901, Western Reserve University has required the completion of the junior year in a recognized college of liberal arts for entrance to the medical department. It is now announced that, beginning in October, 1910, for unconditional entrance, a degree of A.B., B.S., Ph.B., Litt.B., or equivalent will be required, and that the work for the obtaining of such degree must have included inorganic chemistry, physics, biology and Latin, such as would be obtained by satisfactory completion of the following courses:

A. Inorganic chemistry, including qualitative analysis, as represented by a course containing at least five actual hours per week through one collegiate year, of which at least one-third shall be laboratory work.

B. Physics, as represented by a course of at least three actual hours per week for one-half collegiate year, of which at least one-third shall be laboratory work.

C. Biology (botany or zoology or a combination of these), as represented by a course of at least three actual hours per week for one-half collegiate year, of which at least one-third shall be laboratory work.

D. Latin of at least one year's work, as represented by Latin grammar and the reading of four books of Cæsar, or equivalent.

Conditional entrance will be granted on the completion of the junior year in an approved college or scientific school, including the subject requirements above mentioned, on condition that the student obtain his baccalaureate degree before he enters the third year of the medical course.

Maryland December Report

Dr. J. M. Scott, secretary of the Maryland Board of Medical Examiners, reports the written examination held at Baltimore December 8-11, 1908. The number of subjects examined in was 9; percentage required to pass, 75. Of the 53 applicants who were examined 15 participated in the examination for the first time, and of these 12 were successful. Twenty-seven applied for re-examination in branches in which they had previously failed; of these 12 were successful, working off all branches. Primary examinations require a general average of 75 per cent. Those re-examined are required to make 75 per cent. in each branch. Nine reciprocal licenses were granted at this meeting and two candidates were licensed under the exemption clause. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Georgetown University	(1908)	75, 86, 87
Baltimore Medical College	(1905)* (1907)* (2, 1908)* (1908)	84
College of Physicians and Surgeons, Baltimore	(1906) 86; (1907)* (1908)* (1908)	94.
Maryland Medical College	(2, 1907)*	
University of Maryland	(3, 1908)* (1908)	78, 85
Johns Hopkins University	(1908)	85
Jefferson Medical College	(1907)* (1907) 93; (1908)	75
University of the South	(1908)	76

FAILED

College	Year Grad.	Per Cent.
Howard University, Washington	(1908)	70
University of Maryland	(2, 1904)* (2,1907)* (1908)* (1908)	67
Maryland Medical College	(1906)* (2, 1908)*	
Baltimore University	(1907)*	
College of Physicians and Surgeons, Baltimore	(1904)*	
Baltimore Medical College	(1905)* (2, 1906)* (1908)*	
Long Island College Hospital	(1905)*	
University of the South	(1908)	66

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Howard University	(1903)	W. Virginia
Georgetown University, (1891) Dist. Columbia;	(1897)	Iowa
Rush Medical College	(1883)	Wisconsin
College of Physicians and Surgeons, Chicago	(1905)	Illinois
University of Maryland, (1904) West Virginia;	(1907)	Georgia
College of Physicians and Surgeons, Baltimore	(1908)	W. Virginia
University of Virginia	(1902)	W. Virginia

LICENSED UNDER EXEMPTION CLAUSE

College	Year Grad.
University of Maryland	(1880)
University of Pennsylvania	(1890)

* Re examined. No percentage assigned.

Ohio December Report

Dr. George H. Matson, secretary of the Ohio State Board of Medical Registration and Examination, reports the written examination held at Columbus, Dec. 8-10, 1908. The number of subjects examined in was 10; total number of questions asked, 100; *percentage required to pass, 75.* The total number of candidates examined was 34, of whom 32 passed and 2 failed. Eleven reciprocal licenses were issued. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Georgetown University	(1908)	91
Rush Medical College	(1908)*	
American Medical Missionary College	(1902)	82
Kentucky School of Medicine	(1908)	83
University of Louisville	(1908)	81
College of Phys. and Surgs., Baltimore. (1907) 76;	(1908)	85
Baltimore Medical College	(1907)	88
Tufts *College* Medical School	(1908)	79
University of Michigan	(1908)	90
Ensworth-Central Medical College	(1899)	81
University and Bellevue Hospital Med. Coll	(1903)	89
Long Island College Hospital	(1908)	85
Ohio Medical University	(1898)	88
Cleveland Homeopathic Medical College	(1908)	75
Pulte Medical College	(1892)	77
Toledo Medical College	(1908)	79
Columbus Medical College	(1880)	79
Miami Medical College	(1908)	85
Eclectic Med. Institute, Cincinnati. (1906) 78;	(1908)	82, 88, 88
Western Reserve University	(1908)	77
Cleveland College of Physicians and Surgeons	(1908)	77, 82
Woman's Medical College of Pennsylvania	(1908)	85
Jefferson Medical College	(1908)	84
University of Virginia	(1904)	90
University of Toronto, Canada	(1907)	91
University of Prague, Austria	(1904)	89
National University, Athens, Greece	(1899)	81

FAILED

College	Year Grad.	Per Cent.
College of Physicians and Surgeons, Chicago	(1906)	72
Meharry Medical College	(1908)	69

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Rush Medical College (1906)	(1908)	Illinois
Indiana Medical College	(1906)	Indiana
C[illegible] irgeons, Baltimore	(1905)	Maryland
J[illegible] ool	(1907)	Maryland
B[illegible]	(1908)	Maryland
D[illegible]	(1908)	Michigan
U[illegible] meopathic Dept	(1908)	Michigan
S[illegible]	(1907)	New York
University and Bellevue *Hospital Med. Coll*	(1908)	New York
Long Island College Hospital	(1908)	New York

* No grade given.

Marriages

Forrest Gabbert, M.D., to Miss Virginia Wood, both of Louisville, Ky., February 3.

Howard Force, M.D., Ludington, Mich., to Miss Francis M *Penton of Detroit, February 2.*

Eugene L. Pessagno, M.D., Baltimore, to Miss Mary L. Everly, at Baltimore, February 11.

Scott Goodpaster, M.D., Cincinnati, Ohio, to Miss Katherine Rice of Owingsville, Ky., February 24.

John T. Powers, M.D., Osceola, Wis., to Miss Bessie Erema Rosenquist of Ladysmith, Wis., recently.

John Raymond Barber, U. S. Army, to Miss Faith Constance Woodward, at Washington, D. C., February 5.

Deaths

William Tillinghast Bull, M.D., the famous surgeon of New York, died at Wymberly, Isle of Hope, near Savannah, Ga., from cancer of the neck, February 22, aged 59. He was born in Newport, R. I., May 18, 1849; was graduated from Harvard with the degree of A.B. in 1869, received his degree of medicine from the College of Physicians and Surgeons in the City of New York, 1872; and after an interneship in Bellevue Hospital and two years' *study in Europe, settled for practice in* New York City. He was in charge of the New York Dispensary from 1875 to 1877; of the Chambers Street Hospital in 1877 and 1878; had been visiting surgeon of the New York Hospital since 1883; visiting surgeon of St. Luke's Hospital from 1880 to 1883, and since that time consulting surgeon of the institution; consulting surgeon to the Hospital for the Ruptured and Crippled, Roosevelt, Womans' hospitals, and to the State Emigrants' Hospital. He began his teaching work in his alma mater in 1879 as demonstrator of anatomy, and was made professor of practice of surgery and clinical surgery in 1889. He was a member of the American Medical Association, a fellow of the American Surgical Association and of the New York Academy of Medicine, and a member of many other scientific societies. He was highly esteemed by the medical profession of his state and the United States, not only because of his skill as a surgeon, but because of his sound judgment and the zealous application which he gave to his cases. Dr. Bull was a frequent contributor to the medical literature. For several months he had been ill with cancer *of the neck and made a brave fight for life, using all the* methods of treatment known to science, but without avail. On January 29 he started for Georgia in the hope of being benefited by the milder climate, but improvement was only temporary and he gradually failed and died, the immediate cause of his death being edema of the lungs.

George Osborn Morgridge, M.D. College of Physicians and Surgeons, Keokuk, 1870; State University of Iowa, Iowa City, 1875; a veteran of the Civil War; for fifteen years a member of the board of education; and for several terms its president; formerly a member of the faculty of the Kansas Medical College, Topeka, and local surgeon of the Santa Fe system; a member of the Muscatine County Medical Society; died at his home in Muscatine, from heart disease, February 11, aged 69.

John W. Ramsay, M.D. Jefferson Medical College, Philadelphia, 1863; regimental and division surgeon in the Confederate service during the Civil War; sometime president of the West Virginia State Medical Association, and Harrison

County Medical Society; local surgeon for the Baltimore and Ohio Railroad; and a director for the West Virginia Hospital for the Insane, Weston; died in his apartment in Clarksburg, February 4, from senile debility, aged 76.

Morgan L. Woodruff, M.D. Long Island College Hospital, Brooklyn, 1878; a member of the Massachusetts Medical Society; formerly president of the Berkshire District Medical Society; from 1884-1897 a member of the Pittsfield board of health and for several years town physician; visiting surgeon to the House of Mercy Hospital, Pittsfield; was killed February 11, by the derailment of an electric car in Pittsfield, Mass., aged 56.

Elmo Allen Hall, M.D. Denver (Colo.) College of Medicine, 1901; a member of the American Medical Association, and Wyoming State Medical Society; for two years medical director of the State Hospital for the Insane, Evanston, Wyo.; surgeon for the Treadwell Mining Company, and local surgeon for the Santa Fe System at Mayer, Ariz.; died in that place, February 1, aged 30.

John Thomas Fritts, M.D. Bellevue Hospital Medical College, New York City, 1866; formerly a member of the American Medical Association; for more than thirty years local surgeon at Plainfield, N. J., to the New Jersey Central R. R., and for several years surgeon to the Public Service Corporation; died at his home February 8, from edema of the lungs, aged 63.

John Campbell, a veteran of the Civil War; for more than half a century a practitioner of medicine; from 1885-1889 medical referee in the Pension Bureau, Washington, D. C.; and thereafter district inspector in Philadelphia, of the Equitable Life Assurance Company of New York; died at his home in Philadelphia, February 4, from pneumonia, aged 80.

Eleanor Galt Simmons, M.D. Womans' Medical College of Pennsylvania, Philadelphia, 1879; a member of the American Medical Association; died at her home in Cocoanut Grove, Fla., February 2, from tuberculosis of the brain, aged 55. At a special meeting of the Dade County Medical Society, resolutions of regret and sympathy were unanimously adopted.

George Luther Nye, M.D. Medical College of Virginia, Richmond, 1869; formerly vice-president of the West Virginia State Medical Association; acting assistant surgeon of the Forty-fifth Virginia Infantry, Confederate States of America, during the Civil War; owner of the Nye Lithia Springs near Wytheville, Va., died at his home near Hurricane, W. Va, February 4, aged 67.

Wm. T. Bull, M.D., Born May 18, 1849. Died Feb. 22, 1909

Joshua M. Cooper, M.D. Jefferson Medical College, Philadelphia, 1868; one of those whose homes were destroyed in the Johnstown flood; a member of the Medical Society of the State of Pennsylvania; censor of the Medico-Chirurgical College of Philadelphia; consulting physician to the Meadville City Hospital; died at his home February 11, aged 64.

William J. Sullivan, M.D. Starling Medical College, Columbus, Ohio, 1853; assistant surgeon of the Ninety-sixth and the One Hundred and Thirty second Ohio Volunteer Infantry and later division surgeon during the Civil War; an honorary member of the Champaign County Medical Society; died at his home in Urbana, Ohio, February 13, aged 84.

William A. Whayne, M.D. University of Louisville (Ky.), 1890; of Pueblo, Colo.; a specialist on diseases of the eye, ear, nose and throat; chief ophthalmic surgeon of the Texas S. S. and S. Railroad; and formerly ophthalmic surgeon to the Nashville, Chattanooga and St. Louis R. R. at Paducah; died in Pueblo, from pneumonia, February 9, aged 44.

William S. Cannon, M.D. Medical College of Georgia, Augusta, 1860; surgeon in the Confederate service during the Civil War; local surgeon of the Carolina and Western R. R.; member of the American Association of Life Insurance Examining Surgeons; died at his home in Ellenton, S. C., February 3, aged 73.

John Bailey Mullins, M.D. University of Maryland, Baltimore, 1887; a member of the American Medical Association and the American Society of Laryngology and Otology; formerly of Norfolk, Va.; died at his home in Washington, D. C., from cerebral hemorrhage, February 11, aged 42.

Alexander F. Wills, M.D. Jefferson Medical College, Philadelphia, 1856; a member of the Medical Society of Virginia; physician to the Amherst county almshouse; for a time a member of the board of supervisors of the county; died at his home in Clifford, February 4, aged 75.

Abner G. McGrew, M.D. State University of Iowa, Iowa City, 1876; a member of the Nebraska State Medical Association; and of the National Association of Railway Surgeons; died at his home in Geneva, February 10, from pneumonia, aged 71.

James H. McCaleb, M.D. Tulane University, New Orleans, 1888; of Gonzales, Texas; a member of the State Medical Association of Texas; died in a sanitarium in San Antonio, February 3, two days after an operation for appendicitis, aged 46.

James Alvin Van Winkle, M.D. Starling Medical College, Columbus, Ohio, 1893; a member of the American Medical Association and a prominent practitioner of Greene county, Ohio; died at his home in Spring Valley, February 11, aged 44.

John Jay Piper, M.D. Indiana Medical College, Laporte, 1849; for three terms a member of the board of county commissioners of Spokane county, Wash.; died at his home in Spokane, June 18, 1908, from organic heart disease, aged 77.

Anthony H. Bryan, M.D. University of Louisville (Ky.), 1857; an honorary member of the Indiana State Medical Association; died at the home of his son in Evansville, February 8, from senile debility, aged 76.

Richard J. Trippe, M.D. Atlanta (Ga.) Medical College, 1882; of Cartersville, Ga.; a member of the American Medical Association; died in a sanitarium in Atlanta, February 9, from erysipelas, aged 47.

Harry Clifford Secrist, M.D. Miami Medical College, Cincinnati, 1881; died in his apartment in Moline, Ill., February 4, from the effects of formaldehyd, said to have been taken with suicidal intent, aged 58.

Hjalmar Nyvall, M.D. Cleveland Homeopathic Medical College, 1896; died at his home in Cleveland, February 3, from laryngeal tuberculosis, aged 51.

Alden Woodbridge Brown, M.D. Eclectic Medical College of Maine, Lewiston, 1885; died at his home in Salem, Mass., February 9, aged about 70.

John Frank Thornton, M.D. Chattanooga (Tenn.) Medical College, 1894; of Witting, Texas; died at Hallettsville, Texas, Dec. 1, 1908, from gastritis, aged 36.

Albert Franklin Sherman, M.D. Chattanooga (Tenn.) Medical College, 1898: died at his home in Avondale, Chattanooga, February 5, aged 54.

Christopher P. Gerrish, M.D. Medical School of Maine, Brunswick, 1855: died at his home in South Berwick, Maine, February 2, aged 79.

John Clarence Cutter, M.D. Harvard Medical School, Boston, 1877; died at his home in Worcester, Mass., February 2, from paralysis, aged 57.

Richard R. Sigler, M.D. University of Louisville, Ky., 1882; died at his home in Ramsey, Ind., February 7, from pneumonia, aged 70.

Frank Hoxie, M.D. Long Island College Hospital, Brooklyn, 1877; died at his home in Union Springs, N. Y., February 5, aged 55.

George Fox, M.D. Geneva (N. Y.) Medical College, 1852; of Caledonia, Mich.; died January 27, from senile debility, aged 87.

Julian A. Buell (license, Mich., 1900); since 1866 a practitioner of Franklin, Mich.; died at his home, February 3, aged 69.

Society Proceedings

COMING MEETING

Medical Society of the Missouri Valley, St. Joseph, Mar. 18-19.

PHILADELPHIA NEUROLOGICAL SOCIETY

Regular Meeting, held Jan. 22, 1909

The President, Dr. J. W. McConnell, in the Chair

Morbid Sleepiness

Dr. T. H. Weisenburg: The patient, a woman aged 32, with an excellent family and past history, was raised on a farm and all her life had been accustomed to rising at 4:30 in the morning and going to bed about 7 at night. At the age of 16 it was first noticed that she had a tendency to sleep at all hours of the day. For instance, she would rise in the morning and directly after breakfast would put her head down on the table and go to sleep, this continuing until some one woke her. This condition has persisted ever since, or for sixteen years. At one time for a period of about three years she would even go to sleep while on her feet; she would hang her head to one side and then would sink into a chair and sleep until some one would waken her. The sleep would last indefinitely unless she was awakened. Within the last three years she has grown somewhat better. Examination showed a young woman, well built, with rather large features, skin of normal tension and nutrition There was some mild refractive error which has been corrected by glasses. Examination did not demonstrate any so-called neurasthenic or hysterical stigmata. The reflexes were normal and no discoverable neurologic symptoms were found. The thyroid was not enlarged and there was no suggestion of myxedema or acromegaly. Urine and blood examinations were negative. The patient was placed on static electricity and suggestive treatment, the course of her daily routine was changed and she has improved very much and now bids fair to become cured of her disease. While a morbid sleepiness in neurasthenic and hysterical persons and in some forms of brain tumor is not uncommon, it is rather unusual for a condition to have persisted for sixteen years and then yield to treatment in the short period of two weeks. Another rather interesting feature of this case has been that for many years the patient was not able to laugh audibly. She is of a cheerful optimistic disposition, and while she would smile she could not laugh. She is now able to laugh like any other person.

DISCUSSION

Dr. H. Carncross: Recently, I saw at the Polyclinic a woman who would go to sleep at any time during the day. She went to bed at 6 o'clock in the evening and did not arise unusually early in the morning. She was extremely melancholy and had no desire to do anything.

Dr. F. X. Dercum: Probably all physicians have seen patients with sleep disturbances approximating those in Dr. Weisenburg's case, but I do not recall having seen a patient who slept as much as this one. I had a young mulatto woman under my care who fell asleep under all sorts of conditions and circumstances and who proved to be suffering from myxedema. She improved greatly under thyroid extract. However, in cases which are purely psychic, as Dr. Weisenburg's appears to be, thyroid extract might answer the purpose. It might be given in doses large enough to keep the patient awake, beginning with small doses and gradually increasing until some effect was achieved.

Dr. T. H. Weisenburg: Dr. Dercum's suggestion is a good one, and I shall act on it. The case is probably psychic, because with only two weeks' treatment I have been able to keep the patient awake nearly all day. I am giving her small doses of caffein and using suggestive therapeutics almost entirely. Instead of getting up at 4:30 she gets up at 6 or 7 o'clock and goes to bed at a decent hour.

A Brain with Extensive Unilateral Softening

Dr. A. C. Buckley read the notes of this case: The brain was that of a woman, aged 47, who had suffered from valvular heart disease for about two years. About four months before her death she suddenly lost the use of the right arm and became aphasic. Her spontaneous speech was limited to a few simple expressions as "good morning," "I can't see" (meaning "speak"), "yes," "no"; she named key, pencil, table, chair. To pronounce words was often an effort. Spoken language was apparently well understood, and she could read to herself and could promptly detect mistakes when words shown to her were read wrongly aloud by others. She could recognize objects and could indicate their use, though unable to name them. She could copy printed words, and was able to arrange cardboard letters to form words, both being done with the left hand; there was inability to write the name of object dictated. The case appeared to be one of the motor type of aphasia. Pathologically, there was a rather extensive softening, chiefly confined to the lower part of the central convolution, anterior to the central fissures, Broca's convolution appeared to have escaped. Posterior to the central fissure there was no softening of the ascending gyrus, but the inferior parietal was largely included in the process. The anterior end of the temporal lobe was also softened. The absence of auditory symptoms was doubtless to be explained by the fact that the softening in the temporal bone was evidently of much more recent occurrence than in the other areas, and that it occurred during the last week of life, when, on account of the attack of cardiac failure, it was impossible to examine the patient for word deafness.

DISCUSSION

Dr. F. X. Dercum: This is an interesting and important specimen because of the findings of the lack of involvement, at least so far as surface indications go, of the third frontal convolution. It appears as if the occlusion had taken place posterior to the branch which supplies the third frontal convolution, and that the patient had had a motor aphasia plus the sensory phenomena which are usually present.

Optic Neuritis Associated with Disease of the Frontal Sinus and Ethmoidal Cells

Dr. Samuel D. Risley: It should be remembered that the mucous membrane lining the interior of the nose is continuous through narrow drainage canals with the lining "mucoperiosteum" of all the accessory sinuses. These sinuses are likely, therefore, not only to participate in the infectious diseases of the nasal membrane, but by their anatomic situation are removed from any favorable opportunity for natural protection by the usual methods of increased secretion and free drainage. The intimate anatomic connection of the inflamed membrane lining the thin bony walls of these cavities; the frequent lapses in the bony continuity of their walls; the network of sutures which in adult life unite the different centers of ossification; the numerous foramina for the passage of nerves, arteries, veins and lymph channels, all give opportunity for the migration of infectious products to contiguous tissues. Since the walls of these sinuses form so large a part of the walls of the orbit, it is not cause for surprise that the contents of the orbit are liable to invasion. Disease of the sinuses does extend to the orbital tissues, leading to abscess of the orbit and even to severe optic neuritis. In one case there was orbital abscess with optic neuritis, contracted field, swollen papilla and vision reduced to 1/5. The order of events in the history was complete blocking of the upper nasal fossa with polypoid mass and hypertrophy of the middle turbinate, purulent infection of right frontal sinus, partial drainage into the antrum of Highmore. necrosis of the floor of the frontal sinus and extension to the orbit, proptosis of the eyeball, optic neuritis, complete relief and restoration of normal vision by operation. In another case, there was double optic neuritis, contracted fields, no scotomata, V. = 1/5 in each eye, successive crops of retinal hemorrhages, violent fronto-occipital headache and insomnia. After consultation with Dr. Weisenburg a decompression operation was advised for relief of the optic neuritis, notwithstanding the absence of focal symptoms. Operation was refused by the patient. During two years potassium iodid and mercurials were administered without result. The upper nasal fossæ were then found blocked by polypoid masses and hypertrophied and enlarged middle turbinates. Transillumination showed both frontal sinuses and anterior ethmoidal cells opaque. The polypoid tissue was removed with a snare and the middle turbinates were amputated. This was followed by a profuse creamy white discharge which continued for many days in diminishing quantity. The operations were followed by prompt relief of the pain and insomnia and a steady subsidence of the swelling in both optic nerves. In a month the fields of vision were normal and in two months central vision rose to 6/5 in each eye, and a year after the operative interference the man remained well. The swelling of the papillæ had entirely disappeared. In a third case the patient, a man, when first seen, was blind in the right eye from atrophy of the optic nerve, and vision was reduced to 1/10 (6/60) in the left from well-advanced atrophy. The field was contracted and fixation eccentric (central scotoma).. The same nasal and sinus conditions were present as in the other cases, but amputation of the turbinates was not permitted. Large polypoid masses, however, were removed with the snare and the parts carefully irrigated for a month, during which vision in left eye rose to 6/20. The patient then went to Europe and placed himself under the care of Professor Pagenstecher. After an absence of six months he returned totally blind in both eyes and the upper nasal fossæ again stuffed with a polypoid mass, and still suffering from frontal headache. A careful study of the patient by Dr. C. K. Mills failed to discover any focal symptom. Since these experiences I think it probable that some of the inexplicable cases of optic neuritis I have seen, and which have not proved amenable to treatment, may have belonged to this group of optic neuritis due to sinus disease.

DISCUSSION

Dr. T. H. Weisenburg: When I first saw the patient he had the general symptoms of brain tumor, viz., headache, vertigo and choked disc which gave me the impression that the man had a brain tumor, but fortunately for the patient, he would not consent to operation.

Dr. Alfred R. Allen: It might be possible to effect a cure in such cases as Dr. Risley's by the use of hyperemia. Schmieden and Meyer have had more or less success in clearing up these troublesome conditions by this method. To treat a choked disc in this way seems somewhat homeopathic but it could be done while the disc was kept under observation to see if any harm were being done. If the treatment could be prolonged the first etiologic factor could be cleared up.

Dr. C. W. Burr: This is important to neurologists because the first thing they think about when they see an irregular optic neuritis is intracranial disease and I am sure that not a few cranial operations would have been spared if neurologists had understood the subject which has been presented.

Dr. William G. Spiller: Dr. Risley's paper is important in that it shows how optic neuritis may be produced by extracranial disease. Whenever there is no sign of intracranial disease outside of the optic neuritis, the nose and its sinuses should be examined.

Dr. F. X. Dercum: The paper brought out the fact that in a large hospital service the patients can not be examined so exhaustively as they should. Will Dr. Risley explain the mechanism of the production of optic neuritis by sinus disease?

Dr. S. T. Risley: If time had permitted I would have reported other cases presenting other phases of the subject. In reference to treatment of these cases patients with *stauungshyperämie*, the only treatment apt to prove of value when the sinuses are blocked with pus is to drain them. Optic neuritis is retrobulbar in origin. The optic atrophy observed in some of these sinus cases is probably not primary but begins as a choked disc and the atrophy is part of a retrograde neuritis.

Indurative Headache

Dr. N. S. Yawger: Indurative headache is of organic origin, chronic and usually paroxysmal, occurring in various parts of the head, and due to deposits or infiltrations at different points, chiefly in the muscles of the head and neck. The disease has been recognized for years abroad, notably in Sweden and Germany. Edinger states that this is probably the most frequent form of organic headache. This condition is sometimes called cephalalgia, cephalodynia, migraine, hemicrania, cranial neuralgia or neuritis, and seems to be due to a deposition at the insertions or within the bodies of the muscles of the head and neck. It comes and goes at first and later becomes chronic, and when the chronic condition is present a headache may be brought on by fatigue, bad air, chilly and rainy weather. In the latter case it is sufficient to get within the outer limits of storm conditions and not necessarily within the area of rainfall. Attacks are most frequent in the fall and spring. It seems likely that the condition is due to an excess of uric acid or an allied substance and the subjects are often neurasthenic. The depositions are found present in three stages: (1) Swelling, (2) resistance, (3) induration. The longer they exist the firmer they become and the more resistance they offer to treatment. During the attack, fever and redness are absent. All cases of headache should be examined by forcible flexion and twisting of the neck which will often bring out pain at the sites of these depositions in the back of the head and neck. Examination can be made to best advantage during a paroxysm because the swelling and sensitiveness are then greater. The scalp should be thoroughly palpated for thickenings, irregularities, indurations, and nodules. Points of hypersensitiveness are frequently found in the trapezius, scaleni, splenii, and sternomastoid muscles, along the base of the scalp and adjacent parts of the neck, on the spinous processes of the upper cervical vertebræ, and in the temporal and supraorbital regions. Other sites of invasion of these deposits are the inner side of the knee, the inner and outer aspect of the ankle, and within the bodies of the deltoid and abdominal muscles. Cases have been mistaken for meningitis, appendicitis, or sciatica. Deafness has been produced by pressure on the Eustachian tube. The picture presented by lumbago is strikingly similar, inasmuch as it may follow exposure to cold, it may become chronic and offer resistance to palpation, it is relieved by pressure, there is an absence of fever and redness, and it yields to the same treatment. Persons having a tendency to these depositions should drink an abundance of water between meals, avoid fatigue, take outdoor exercise, and, if the condition is later proven to be due to an excess of uric acid or an allied substance, the diet should contain a low percentage of purins. For a severe acute attack it is wise to give a purgative, a hot bath, apply hot dry applications locally and give repeated large doses of sodium salicylate or aspirin, or salophen internally.

Other Papers Read and Cases Presented

"A Case of Probable Occlusion of the Posterior Inferior Cerebellar Artery," by Dr. Horace Carncross; "Hysterical Paralysis," by Dr. C. W. Burr; "The Syphilitic Form of Multiple Sclerosis," by Drs. W. G. Spiller and A. H. Woods; exhibition of "Gordon's Precision Aesthesiometer," and "Disease of the Optic Nerve as the Early Symptom of Multiple Sclerosis," by Dr. Alfred Gordon.

CALIFORNIA ACADEMY OF MEDICINE

Regular Meeting, held in San Francisco, Dec. 22, 1908

The President, Dr. Howard Morrow, in the Chair

Exophthalmic Goiter

Dr. Emile Schmoll, San Francisco: I have here a man with exophthalmic goiter. When the patient first consulted me he presented the following symptoms: There was tachycardia and the legs were edematous up to the abdomen. There was enormous tumefaction of the liver, which reached below the umbilicus, and was pulsating. The pulse was 160, and irregular. There was dilatation of the heart, the apex beat reached to the left axillary line, the right side being 3 cm. outside the right sternal border. There was enlargement of the thyroid on both sides; the gland was soft to the touch and was pulsating. The circumference of the neck was 16½ inches. There was very pronounced exophthalmos. In view of the critical condition of the heart and the mitral and tricuspid insufficiency, it was thought that surgical interference was impossible or that before such question could be decided the circulatory symptoms must be improved. Furthermore, in my opinion, the presence of an enlarged thymus behind the upper part of the sternum, spoke against surgical intervention. Deaths on the operating table or following within twenty four hours after operation have shown that in the majority of these cases of exophthalmic goiter there is a persistent thymus. Garry, of Bonn, considers that dulness behind the upper part of the sternum contraindicates operative interference. It was decided, therefore, to treat this patient internally, and he was put on complete rest and digitalis. He responded very quickly. The amount of urine began to increase on the second day, and on the fifth or sixth day the edema had completely disappeared. The liver had diminished considerably, to about 1 cm below the costal border, and the acute dilatation of the heart had disappeared. However, at this time, while the tachycardia had been controlled by the digitalis, the goiter did not show any change and the exophthalmos did not retrocede, while the nervous symptoms had become excessive On one evening the man even presented an attack of acute mania; it was impossible to reason with him and large doses of morphin were needed to quiet him. It was then decided to try a line of treatment which I have followed in several other cases with good results: meat was excluded from the diet. The amount of albumin and nitrogenous food was reduced to the minimal amount with corresponding carbohydrates and fat I gave food which contained about 70 grams of albumin and about 3,000 calories which was more than he needed, and the man began to gain rapidly. At the beginning I gave him sodium phosphate, but could not see any improvement. I then gave ½ grain of sodium iodid twice a day. Under this treatment the pulse came down to about 70 a minute, still remaining irregular; the heart, however, was fully compensated. The goiter began to show improvement after three or four days; it became harder, losing its pulsating character, and the exophthalmos retroceded. After this treatment had been carried out for several weeks, the circumference of the neck was reduced to 15¼ inches and the exophthalmos was still retroceding; it is, however, still noticeable Lately the pulse has gone up again. There is no sign of cardiac insufficiency. The nervousness has almost completely disappeared and the patient has gained about 20 pounds in weight.

My standpoint has been that in every case of exophthalmic goiter internal treatment ought to be tried. If within two months there is no improvement the case ought to be turned over to the surgeon. As an indication as to whether improvement is obtained, I especially consider the *weight* of the patient. If the individual increases in weight and the nervous symptoms are controlled, I consider the case to be progressing favorably and to present a favorable outlook for internal treatment. If, however, the patient loses weight, surgical treatment should be instituted. In this case the pulse has remained irregular.

DISCUSSION

Dr. W. I. Terry, San Francisco: Every patient with exophthalmic goiter should be under medical treatment for a short time, and if no improvement is obtained, surgical interference should be considered. Some of these patients respond promptly to medical treatment. I think some of the edema and heart symptoms and the liver condition were probably due to a preceding typhoid. This goiter came on immediately after an attack of typhoid, which may have weakened the heart muscle to a considerable degree. Dr. Schmoll has also improved the exophthalmos, but he has not cured it, nor can he expect either by surgical or medical means to cure an exophthalmos when it is so pronounced. The question of relapse in these cases is to be thought of. This man will have to be followed up for some time; he may relapse, and if he does a thyroidectomy will be indicated. The operation should certainly be done before the heart muscle gives out and before the man has the typical extreme symptoms of exophthalmic goiter.

Dr. W. W Kerr, San Francisco: Like other medical men I am always glad to hear of something that gives us more hope than we have had before in the treatment of exophthalmic goiter. Many cases are inoperable, more especially in women, who suffer from a great deal of circulatory disturbance, and with whom the question of operation sometimes can not be considered. The use of digitalis I have never found satisfactory; sometimes one can alleviate the disturbance, but there are never results which give one confidence to persist in its use. Sometimes there is improvement when the patient has led an active life and has strained the heart, and in that case there might be restored compensation. The use of an iodid has not been successful in my hands I generally use it in doses of from 5 to 10 grains, giving from 15 to 30 grains in a day, and have never seen any good come from it. In most cases the disease was more aggravated than benefited by it. I may have been at fault in giving such a large dose.

Dr. Emile Schmoll, San Francisco: In this case I have not had an occasion to use anything so far as the circulation was concerned, because the pulse immediately fell after the use of digitalis to 80 I agree with Dr. Kerr that digitalis is useless unless one has to deal with myocardial insufficiency. Again, with rapid pulse digitalis is often dangerous and should be advocated only in cases in which there is decided myocardial insufficiency and in which there is edema and enlargement of the liver.

Medicolegal

What Is Included in the Term "Limb"

The Court of Appeals of Kentucky says, in Lorts & Frey Planing Mill Co vs Weil, a personal injury case brought by the latter party, that it was alleged in the plaintiff's petition that, as a result of his fall, the tendons, ligaments and muscles of his limbs had been permanently weakened, and their strength impaired, whereas on the trial he testified, among other things, that the ligaments in one of his feet, which held the instep in a curved position, were severed, which caused the instep to drop, which produced what is known as "flatfoot." This last statement the defendants claimed surprised them; that they had no reason to anticipate that any such injury would be claimed by the plaintiff; that it was only claimed in the petition that his legs were injured. But the court is of the opinion that the defendants had no reason to be surprised at the introduction of this testimony, because, while the word "foot" did not specifically appear in the petition, it was alleged that the plaintiff's limbs were injured, and the word "limb" includes from the hip to the sole of the foot.

Breach of Marriage Promise for Syphilis

The Supreme Court of Iowa says in the breach of marriage promise case of Beans vs. Denny that the court might well have directed the jury that a person is always excusable for declining to carry out his promise of marriage to one afflicted with syphilis, unless made with the knowledge of this condition. See, as bearing on this subject, Trammell vs. Vaughan, 158 Mo., 214; Allen vs. Baker, 86 N. C., 91; Shackleford vs. Hamilton, 93 Ky., 80; Grover vs. Zook, 44 Wash., 489; Gring vs. Lerch, 112 Pa., 244; Goddard vs. Wescott, 82 Mich., 180; Vierling vs. Binder, 113 Iowa, 337. Most of the cases deal with a situation in which disease was pleaded as an excuse or justification for non-performance of the contract by one party when demanded by the other. But in Grover vs. Zook, 44 Wash., 489, the defendant was relieved of his promise to marry an incurable consumptive on the ground of public policy; and it is held in several jurisdictions that the fact that a spouse is afflicted with syphilis when married which is incurable, or of which there is but a remote probability of effecting a cure, is good cause for annulling a marriage on the ground of fraud. These rulings are in harmony with the instruction of the trial court that, in event the plaintiff was not cured, the defendant was under no obligation to perform. But the evidence was in conflict as to whether permanent recovery from the disease in its secondary stage ever could be effected. The physicians agreed that it might be controlled, but some of them insisted that it was a constitutional disorder which was likely to be transmitted to offsprings, and might break out again on the person afflicted, even after the lapse of fifty years. There can be no doubt but that the curability of the disease is matter of grave doubt in the medical profession; and, were this court confronted with the proposition as to whether one who has become afflicted therewith may complain of a breach of a previous promise of marriage at least when made in ignorance of the malady, it should hesitate long before so holding. The point, however, was not saved in this record.

Competent Evidence Against Professional Abortionist

The Supreme Court of Illinois says, in the case of People vs. Hagenow, where it affirms a conviction of murder by producing an abortion resulting in the woman's death, that in some jurisdictions proof that the defendant had been guilty of causing criminal miscarriages or abortions on other pregnant women than the one named in the indictment has been held proper on a trial against the defendant on an indictment of this character (People vs. Sessions, 58 Mich., 594; People vs. Seaman, 107 Mich., 348), while in other jurisdictions it has been held that such proof is not competent (Rosenweig vs. People, 63 Barb. [N. Y.] 634; State vs. Crofford, 121 Iowa, 395). And while there is some conflict in the authorities, and the question is not free from doubt, this court thinks that the evidence is admissible.

Had the evidence in this case shown that the woman in question was the only pregnant woman whom the defendant had caused to miscarry or abort, it might not have been unreasonable to presume that she did so in good faith and for the purpose of saving the woman's life. If, however, it could be shown that the defendant advertised in the public press to treat women who were pregnant; that she stated in such advertisement that she had had long experience in the treatment of such women who were pregnant, etc., it would be clear, the court thinks, that the presumption that she caused the woman to miscarry or abort to save her life would be greatly weakened, and a criminal knowledge and intent on her part to cause her to miscarry or abort would be shown.

Moreover, while the jury would in this case have been justified in findings from the condition of the woman when she went to the defendant's place and the testimony of the physicians who made a postmortem examination that no cause existed for the causing of a miscarriage or the producing of an abortion on her to save her life, the state was not required to rely on this class of testimony alone, but had the right to show, if it could, that the defendant was not carrying on a hospital in a legitimate way for the treatment of women who were pregnant, but that she was a professional abortionist, for the purpose of rebutting the presumption that she in good faith caused the miscarriage or produced an abortion on this woman to save her life, and for the purpose of showing that she must have known that the woman was pregnant, and that she operated on her with the criminal knowledge and intent to cause her to miscarry or to abort; and, if such testimony was competent as a part of the state's case in chief, the defendant could not render it incompetent by any defense to the indictment which she might seek to interpose. Three members of the court dissent.

Cancer and "Sound Health"

The Supreme Court of Minnesota had, in the case of Murphy vs. Metropolitan Life Insurance Co., an action on a life insurance policy which was conditioned that no obligation should be assumed by the company unless on the date thereof the assured was alive and "in sound health." The court holds that the term "sound health," as it was used in the policy, did not mean perfect health, but an absence of any disease that had a direct tendency to shorten life. And the evidence being practically conclusive that the insured was afflicted with cancer when the policy was issued, the court holds that the insured was not then in sound health. It says that it was clear that if the insured at the date of the policy was afflicted with an organic disease, either sarcoma or cancer, he was not then in sound health within the meaning of the policy. The testimony of two physicians related directly to the condition of the boy's knee and the cause of such condition. Their testimony was not wholly opinion evidence, for they respectively testified to facts relating to the condition of the knee and the development of the disease. There was no contraindication, direct or indirect, of the testimony of either of them, nor was the evidence inherently improbable; on the contrary, it seemed reasonable. Neither the judge nor the jury could arbitrarily reject the testimony of the two physicians as to facts or as to their professional opinion based thereon. A fair consideration of their testimony so directly led to the conclusion that the insured, when the policy was issued, had a malignant disease generally known as cancer that the court would have been bound to set aside any verdict to the effect that he was then in sound health.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Boston Medical and Surgical Journal

February 11

1 Serodiagnosis of Syphilis. F. P. Gay and J. G. Fitzgerald, Boston.
2 Human Milk in Treatment of Various Infections. F. P Denny, Brookline, Mass.
3 *Psychotherapy as Applied to Children. A. C. Eastman, Springfield, Mass.
4 Medicine in the Bible (A Brief Review). H. S. Bernstein, Boston.

3 Psychotherapy in Children.—Eastman calls attention to the fact that childhood is the most suggestive period of life and that from early infancy the child is influenced by suggestion. First come the suggestions of external stimuli through the senses, then the suggestion of obedience to certain routine, necessary functions imposed on the infant for his physical development and, finally as speech develops come the innumerable suggestions picked up from the conversation of the child's associates. The older a child grows the more firmly fixed become the habits of both thought and action. Hence, if suggestion can change habits fully developed in an adult, how much easier, says Eastman, to change and model the mind into correct thoughts and actions during this plastic stage of childhood. Eastman divides childhood into three periods, viz., infancy and early childhood, from birth until the age of 5; early school life, from 5 to 10 years of age; early adolescence, from 10 to 15 years of age. At birth, the child is a little animal, instinctively eating and sleeping, oblivious to outside influences. At the age of 5 he has become a human being, so to speak, has learned the first lessons in obedience, and has formed both good and bad habits. His mind is fully alive to his small world and he absorbs more knowledge in twenty-four hours than we can appreciate. During this first period Eastman states that the best time to use suggestion is just after the child has gone to sleep; if this is impossible it may be used during sound sleep. The child should be addressed in a firm natural voice and the suggestion repeated several times; only one suggestion should be used at a time in order to avoid confusing the child. Eastman cites several cases illustrative of the good accomplished by suggestion in children during this age period. In the second age period suggestion is especially adapted to the cure of nervous conditions resulting from too close confinement and too keen competition in school. In both these periods he also advocates "negative suggestion"; in other words, ignoring a symptom is often the best method of teaching the child to overcome it. The third period brings the individual to the borderland between childhood and adult life and of course opens up a large field for therapeutic and educational suggestion.

New York Medical Journal

February 13

5 Theories and Problems of Heredity. J. Wright, New York.
6 Results in Four Hundred Operative Cases of Mastoiditis. F. P. Calhoun, Atlanta, Ga.
7 One Hundred and Ninety Consecutive Operations From Surgical Service of Fordham Hospital. A. Nicoll, New York.
8 *Diagnosis of Chronic Bright's Disease by Signs Other Than Those Furnished by the Urine. H. B. Allyn, Philadelphia.
9 *Practical Results Obtained in the Philippines in Reducing the General Mortality by the Elimination of Intestinal Parasites, Especially the Hook Worm. V. G. Heiser, Manila, P. I.
10 Neurasthenia. H. M. Folkes, Biloxi, Miss.
11 Congenital Hypertrophic Stenosis of Pylorus. W. N. Bradley, Philadelphia.
12 Case of So called Birthmark. F. A. Thompson, Milwaukee.

8. **Non-Urinary Diagnosis of Bright's Disease.**—Allyn states that not infrequently, in his experience, the urine has given very little help in the diagnosis. It is not uncommon for the analyst, in cases of chronic Bright's diseases, to report the urine negative for albumin and casts. In the majority of these cases, but not in all, persistent low specific gravity of the urine directs attention to the probable diseases of the kidneys. Allyn cites cases in which the specific gravity had been well maintained, and yet extensive disease of the kidneys was found at autopsy. The result, therefore, is that chronic nephritis is often overlooked and the patient treated for heart disease, anemia, or weakness and malnutrition of unknown origin. The author enumerates the extra-urinary phenomena of this disease and states his belief that by them the disease may often be diagnosed, even if the urine is negative. Cardiovascular signs of this disease are probably the most constant and important. They consist, briefly, in enlargement of the heart, particularly the left ventricle, in accentuation of the aortic second sound, in raised blood pressure, thickening of the walls of the artery, and in such phenomena as dizziness, headache, hemorrhage and malnutrition. Rise in blood pressure is very common in chronic Bright's disease. Generally, it can be perceived by the finger, if the physician has considerable practice in feeling the pulse. Allyn refers to 130 cases reported by Janeway in which the systolic pressure, recorded by the sphygmomanometer was 200 mm. or more and in all but 10 or 15 per cent. there was chronic nephritis. Thickening of the blood vessels is another frequent symptom; the amount of thickening varies greatly and does not always bear a direct relation to the gravity of the nephritis. Enlargement of the left ventricle is easily made out. The apex beat instead of being within the nipple line is displaced to the left so as to be flush with the nipple line and beyond it; at the same time it is displaced more or less downward. Other cardiovascular phenomena are hemorrhages, which may take place in the skin, kidneys, stomach or bowels. Hematuria occurs occasionally especially in the gouty form of nephritis, when there is arteriosclerosis of the kidney vessels. Albuminuric retinitis and detachment of the retina occur in a number of cases, the former being the more frequent. Sometimes eye changes indicating nephritis are found before the family physician has any suspicion that disease of the kidney exists. Other symptoms are dizziness and vertigo, which may occur as symptoms of disturbed cerebral circulation, as the result of toxemia. Nutritional changes are characterized chiefly by loss of strength and infrequently by nausea, vomiting, painful digestion and attacks of diarrhea, without adequate cause. In toxic phenomena he cites such symptoms as headache, insomnia, delirium, coma, convulsions and hemiplegia, and bronchial and pulmonary symptoms such as dyspnea, bronchitis and edema of the lungs. He states also that he has seen several cases of peripheral neuritis, in one of which there were recurring attacks of gastralgia associated with anacidity.

9. Abstracted in THE JOURNAL, Dec. 5, 1908, p. 1994.

Detroit Medical Journal

January

13 The Surgeon, the Anesthetist, and the Patient. C. S. Oakman, Detroit.

Medical Record, New York

February 13

14 Diet as a Means of Increasing Vital Resistance in Tuberculosis, with Special Reference to the Protein Ration. J. H. Kellogg, Battle Creek, Mich.
15 Cholecystectomy vs. Cholecystotomy. J. F. Erdmann, New York.
16 Diagnostic Use of Tuberculin, with Special Reference to the Cutaneous and Percutaneous Tests. H. F. Stoll, Hartford, Conn.
17 Treatment of Erysipelas by Carbolic Acid and Alcohol. A. Judd, New York.

Lancet-Clinic, Cincinnati

February 6

18 Treatment of Cancer of the Breast, with Special Reference to the Value of Roentgenotherapy. J. T. Dunn, Louisville, Ky.
19 Intelligent Cooperation Between School and Home. L. Bloom, Cincinnati.
20 *Causation and Treatment of Infantile Convulsions. E. W. Saunders, St. Louis.
21 Specialism in Medicine. W. L. Shollenbarger, Cincinnati.

February 13

22 Feeding and the Use of Alcohol in Typhoid. J. H. Landis, Cincinnati.
23 The Incurable Blind. W. S. Keller, Cincinnati.
24 The Hazard Attendant on Association with a Rabid Animal. T. V. Keene, Indianapolis.

20. **Infantile Convulsions.**—Saunders ignores the usual classification of factors of infantile convulsions and adopts the following didactic and clinical nomenclatures:

I.—CENTRAL CAUSES

1. Gross lesions of the brain or meninges, morbid or mechanical, congenital or acquired. 2. Concussion—commotio cerebri. 3. Sudden changes of pressure in the blood or cerebrospinal fluid.

II.—CENTRIPETAL CAUSES

1. Reflexes. 2. Psychomotor.

III.—DISTROPHIES AND INANITION

1. Rickets—tetany. 2. Acute and chronic cerebral inanition.

IV.—HEREDITARY OR CONGENITAL (INORGANIC CAUSES)

1. Similar or dissimilar heredity. 2. Prematurity, congenital debility.

V.—INTOXICATION

The whole list of drugs and poisons, including food poisons, credited with spasmogenic power. (CO_2 and acetone excepted.) Some of them, such as alcohol, may be imbibed with the breast milk.

VI.—INTOXINATION

The specific toxins of acute infectious diseases, including those of organisms like the colon bacillus, which sometimes become parasitic.

VII.—PYREXIA FROM

1. Toxins. 2. Reflex irritation. 3. Heat stroke.

VIII.—AUTOINTOXICATION FROM

1. Gastrointestinal disturbance. 2. Hepatic insufficiency. 3. Disturbance of the internal secretions. 4. Renal insufficiency. 5. Pulmonary and cutaneous insufficiency.

IX.—MATERNAL AUTOINTOXICATION

1. Puerperal eclampsia. 2. Violent emotion shortly before nursing.

X

1. Asphyxia. 2. Whooping cough. 3. Thymic asthma.

XI.—SPASMOPHILIA

XII

Eclampsia of the new born (requires a separate consideration).

He discusses these conditions in detail, and expresses himself profoundly dissatisfied with the result of the routine emergency treatment of infantile eclampsia. He has long discarded the hot bath and is not sure that chloroform is an unmixed blessing. Death by asphyxia is the imminent danger and the system becomes more tetanized as oxygen is withdrawn. He therefore indorses Holt's plea for trial of oxygen inhalation as a routine measure. Morphin as an antispasmodic is more effective than chloroform. The cool pack is not open to the objections of a hot bath. In rickety cases phosphates with appropriate diet and hygiene do good. Bromids and chloral are safe and useful as antispasmodics. Veratrum viride is especially indicated in acute affections.

Northwestern Lancet, Minneapolis

February 1

25 The Interest of the Physician in the Medical Institutions of the State. L. C. Mead, Yankton, S. D.
26 Papillary Synovitis. C. J. Ringnell, Minneapolis.
27 Rectal Anesthesia; Demonstration of Apparatus with Report of Additional Cases. C. F. Denny and L. S. B. Robinson, St. Paul.
28 Mistakes in Diagnosis in the Upper Abdomen. J. E. Moore, Minneapolis.
29 Tabes Dorsalis. W. Reid, Deerwood, Minn.
30 *The Cutting of Cicatricial Strictures of the Esophagus Through the Esophagoscope. W. Lerche, St. Paul.

30. **Cicatricial Strictures.**—Lerche discusses the causation, pathology, symptoms and diagnosis of cicatricial stricture and describes the case of a boy 3 years old who had a severe cicatricial stricture from sucking lye. The child was reduced to skin and bone, and death was imminent. As not even liquid could be swallowed and enemata were the only means of nutriment, he describes the method in which he succeeded in getting a filiform whalebone bougie into the tight stricture by filling a bent glass tube covered with rubber tube with as many of the bougies as would permit an easy gliding in and out of the instrument and passing the rubber covered glass tube down to the obstruction. A little manipulation enabled him to pass one of the filiforms through the first stricture. A second and subsequently a third stricture were penetrated in like manner after some dilatation of the one above it had been effected. Finally he devised a new esophagotome with blades of different sizes and incised the strictures through the esophagoscope. The child recovered and is in excellent health. The method of using filiform whalebone bougies is particularly suitable to valvular and ring strictures. Lerche emphasizes the fact that the cutting of strictures must be done under the guidance of the eye.

Medical Fortnightly, St. Louis

February 10

31 Case of Double Monstrosity (Thoracopagus Teras Anactadidymum.) J. F. Menestrina, St. Louis.
32 *Treatment of Cancer of the Rectum. R. H. Barnes, St. Louis

32. Abstracted in The Journal, Nov. 14, 1908, p. 1728.

American Journal of Medical Sciences, Philadelphia

January

33 *Clinical Significance of Glycosuria in Pregnant Women. J. W. Williams, Baltimore.
34 *Medical Gymnastics in Early Myocardial Incompetence Without Valvular Disease. R. H. Babcock, Chicago.
35 *Value of the Inunction Method of Administering Drugs to Children. B. K. Rachford, Cincinnati.
36 Treatment of Irreducible Congenital Luxations of the Hip by Operative Means. G. G. Davis, Philadelphia.
37 Postoperative Treatment of Malignant Disease. E. G. Williams, Richmond, Va.
38 Differentiation of Common Types of Protracted Fever. D. Bovaird, New York.
39 Certain Complications of Pneumonia. M. H. Fussell, Philadelhpia.
40 Influenzal Meningitis. B. A. Cohoe, Baltimore.
41 **Illuminating Gas Poisoning.* G. I. Jones, Washington, D. C.
42 Circumscribed Serous Spinal Meningitis. W. G. Spiller, Philadelphia.
43 Varix of a Papilla of the Kidney of Persistent Hematuria. H. Cabot, Boston.
44 *Problem of Immunity in Tuberculosis. E. R. Baldwin, Saranac Lake, N. Y.
45 Cammidge Reaction in Experimental Pancreatitis. J. Speese and E. H. Goodman, Philadelphia.
46 Surgery of the Gall Bladder and Bile Ducts. W. D. Hamilton, Columbus, O.

33. **Glycosuria in Pregnancy.**—Williams states that he knows of no complication of pregnancy the significance of which is more variously interpreted than the presence of sugar in the urine. This divergence of opinion, he says, is in great part due to the influence of a paper read by J. Matthews Duncan, before the London Obstetrical Society in 1882. At that time Duncan collected from his own experience and the literature, the histories of twenty-two pregnancies occurring in sixteen women who had become pregnant while suffering from diabetes, or who developed the disease during the course of pregnancy. Of these women four died in coma or collapse within a few days after delivery and seven others perished from diabetes or tuberculosis within the following two years, while 47 per cent. of the children were lost. Matthews concluded, therefore, that diabetes constituted one of the most serious complications of pregnancy and his views were accepted without question. Williams does not agree unquestiongly with Matthews' views and in this article reports in detail cases of glycosuria occurring in his practice and reviews in tabular form cases reported in the literature; from these he draws the following conclusions:

1. A positive reaction with Fehling's solution during pregnancy does not necessarily indicate the existence of diabetes, but is usually due to lactosuria or to transient, alimentary, or recurrent glycosuria.

2. In such cases it is imperative to determine whether the sugar occurs as lactose or glucose, as lactosuria is without clinical significance and is probably associated with premature activity of the breasts.

3. The significance of glycosuria is not so clear. If alimentary in character it may be regarded with impunity. Otherwise it may be of the transient or recurrent variety, or may indicate the existence of true diabetes.

4. If the glycosuria appears late in pregnancy, does not exceed 2 per cent. in amount and is not accompanied by symptoms, it is probably transient and may disappear spontaneously at any time or persist until the end of pregnancy. In either event, it is usually of slight clinical significance, and merely indicates that the patient should be carefully watched. If the sugar appears early in pregnancy and in large amounts, the condition is more serious, as it may be impossible to make a positive diagnosis until after delivery, when the condition disappears in glycosuric, but persists in diabetic patients.

6. Pregnancy may occur in diabetic women or diabetes may become manifest during pregnancy. Either is a serious complication, although the prognosis is not so alarming as is frequently stated; many patients do perfectly well, while a smaller proportion die in coma or collapse at the end of pregnancy, or during or shortly after labor.

7. If the output of sugar is large and can not be controlled, or at least markedly diminished, by suitable dietetic and medicinal treatment the indication of abortion or premature labor is indicated even in the absence of serious symptoms, and much more so when they are present.

34. **Medical Gymnastics in Myocardial Disease.**—Babcock discusses the cardiopathies encountered in men generally of large physique who lead sedentary lives and are, in addition, hearty eaters and heavy smokers. These men generally take on weight and commonly display an abdominal girth out of proportion to the chest development. In a certain percentage of these cases the men have been athletes at college but on entering professional life have neglected physical exercise entirely. In the majority of instances they possess indomitable energy and almost tireless activity, and display a systolic blood pressure that is up to, if not above, the normal limits. In the late fifties or early sixties these men consult the physician for relief from symptoms which betoken long-continued and at length injurious cardiac strain. The entire cardiovascular system is affected, though not uniformly. The kidneys also are involved, though in the cases referred to in this paper the renal inadequacy is overshadowed by the cardiac symptoms. Occasionally the coronaries are so involved as to present symptoms of angina pectoris. Babcock sends patients of this type to a medical gymnast to whom he had explained the end to be attained. The gymnastics to which the patients are subjected are of the kind investigated by Levin, who showed that if certain simple exercises were given properly it was possible to slow and strengthen the pulse instead of accelerating it, a very vital principle in these cases. The exercises given consist in both active and passive movements, according to the degree of myocardial incompetence present. The former comprise certain rolling and bending movements of the trunk executed by the gymnast, who, standing behind the individual seated on a wooden horse, with his feet held firmly by toe-straps, grasps the shoulders and firmly, yet not too vigorously, bends the body forward and then rolls it around to the opposite side in a backward direction, in such manner that, flexed in the beginning, the trunk becomes extended when the movement is half completed, and ends again in a position of strong flexion. To these may be added passive flexion and extension of the extremities, and alternate expansion and compression of the chest, very much after the manner of performing artificial respiration. The active exercises, which in all cases are gentle at first and performed by the help of the gymnast, and only by degrees increased in vigor, consist in deep breathing, in bending, pulling, lifting, etc., on a horizontal bar or ladder, or such other movements as in the judgment of the gymnast will promote respiration and venous flow and reduce the girth of the ab-

domen. But whatever be the kind of exercises, one essential principle underlies them all, namely, the patient must not be allowed to hold his breath, but must breathe regularly and deeply in rhythm with the movements so as to inspire or expire according as the exercises expand or contract the chest and depress or raise the diaphragm

The purpose of these exercises is not the development of the skeletal muscles but the restoration of the functional integrity of the myocardium, and this they accomplish more or less effectively, not only by increasing venous flow on the one side and by dilating the intermuscular arterioles on the other, but also by improving cardiac metabolism. Of course, the degree and permanence of the improvement must depend largely on the state of the heart muscle. If this is extensively degenerated, no amount or kind of treatment can be expected to achieve much, and such improvement as is gained can not last long. In such cases, therefore, if dilatation and inadequacy are pronounced, the so called resistance exercises are preferable, although to these may be added with advantage such deep breathing movements as, with the aid of a trained attendant, can be performed without danger of strain to the heart wall. As might be expected, the most pronounced benefit has been observed in cases of early or moderate myocardial incompetence, shown by breathlessness, or palpitation on slight cause, and on examination by increased cardiac dulness, feebleness of the first tone at the apex, accentuation of the pulmonic second sound, and sometimes a faint systolic whiff in the mitral area In most, but not all cases, the blood pressure is elevated above the normal. In such cases the first indication of improvement is shown by the greater ease of respiration and a general sense of ease or lightness. Energy is increased and fatigue comes less easily, while a better action of the bowels and a diminution of waist measure are generally observed Babcock states that his experience with medical gymnastics in cases showing early incompetence of the myocardium warrants him in recommending them, if properly controlled, and in asserting the belief that, if these and allied physical exercises were used more extensively and systematically by men of the build and habits to develop chronic myocardial and arterial disease, they would delay, if not prevent, the onset of cardiac inadequacy.

35 **Administration of Drugs to Children.**—Rachford advocates the administration of drugs to young children by inunction He has given in this way guaiacol, iodin, oil of wintergreen, and salicylic acid. These medicines, with the exception of the iodin, were combined with anhydrous lanolin in the proportion of 1 dram to the ounce. In applying the ointments the following technic was observed: The skin of the chest and abdomen was carefully washed with soap and warm water, and hot, moist towels were then applied for a few moments to warm and redden the skin. One dram of the ointment was then carefully and gently rubbed into the skin The inunction was continued for from five to ten minutes Previous to the inunction the child's bladder had been emptied, and directions were then given to save all urine passed. If at the end of two hours no urine was obtained the bladder was emptied by catheterization, and subsequent specimens of urine were also saved for examination. The urine thus obtained was examined to determine the presence or absence of the drug which had been administered by inunction. By this method the following results were obtained: Eight children under 7 years of age were rubbed with oil of wintergreen and in every instance the drug was found in the urine within two hours after rubbing It was observed that in the younger children, some of whom were less than a year of age, the reaction in the urine occurred earlier, in one instance within an hour and one half, so that, on the whole, it may be said that the younger the child the earlier the reaction; if a definite time limit was observed the reaction was stronger in the younger children

41. This article was abstracted in the Department of Therapeutics, Feb 6, 1909, page 473

44. Abstracted in THE JOURNAL, Oct. 24, 1908, p 1447.

Colorado Medicine, Denver

January

47 *Differential Diagnosis of Lesions of the Mouth Due to Carcinoma, Sarcoma, Syphilis and Tuberculosis T. E Carmody, Denver, Colo
48 Etiology and Diagnosis of Syphilis and the Bearing of Our Recent Knowledge of These Points on the Treatment of the Disease C E Edson, Denver
49 Integumental Tuberculin Reaction, with Report of 155 Moro Inunction Reactions G B Webb and W. W. Williams, Colorado Springs
50 Typhoid Fever H G Garwood, Gorham, Colo

47. **Lesions of the Mouth.**—Carmody discusses cancer, sarcoma, syphilis and tuberculosis of the mouth and gives a series of tables illustrating the differential diagnosis between these conditions as affecting the jaw, tonsil, lip and tongue. The article is fully illustrated.

Kentucky Medical Journal, Bowling Green

January

51 *Diagnosis and Treatment of Diseases in the Accessory Sinuses of the Nose G C Hall, Louisville
52 Radiography of the Accessory Sinuses E. T Bruce, Louisville
53 *Care of the Pregnant Woman H M Goodman, Louisville
54 Treatment of Occipito Posterior Positions J K Freeman, Louisville
55 Management of Third Stage of Labor. A. E Gardner, Louisville
56 Care of the Perineum T E Gosnell, Louisville
57 Anatomy and Pathology of Acute Intestinal Obstruction. G A Hendon Louisville
58 *Surgical Diagnosis and Management of Acute Intestinal Obstruction H H Grant, Louisville
59 Acute Intestinal Obstruction—Diagnosis and Medical Management W B Gossett, Louisville
60 Treatment of Strabismus From the Standpoint of the General Practitioner G C Hall Louisville
61 Case of [illegible] ne S B Hays, Louisville
62 Recognit [illegible] by the General Practitioner. H Ke
63 Domestic Sanitation L G Contri, Winona, Ky
64 Etiology and Symptomatology of Strabismus W T. Bruner, Louisville
65 Duction Tests H Kelly, Louisville
66 Non operative Treatment of Squint S B Hays, Louisville.
67 Operative Treatment of Squint. M F Coomes, Louisville

51. Abstracted in THE JOURNAL, Oct. 31, 1908, p. 1546.

53 **The Pregnant Woman.**—The deviation from health to disease in pregnancy is so slight, and often so sudden, that serious complications for mother and child may make headway before recognition. Goodman therefore makes a vaginal examination as early as possible and endeavors to see these patients twice a month. He considers that many subsequent troubles are due to neglect during pregnancy. He insists on proper attention to the condition of the kidneys and urges examination of urine twice a month in the first half, and once a week in the last half of pregnancy. He has known the kidneys to break down in twenty four hours in consequence of overindulgence in meats or rich foods at social functions. The diet of the pregnant woman should be so regulated that the kidneys are not called on to perform extra work. In hyperemesis the elixir of paraldehyd has given him the best results, but it is contraindicated in kidney involvement He insists also on the advisability of an abdominal examination, as well as a vaginal one, in the last two months of pregnancy, to determine fetal viability, multiple pregnancy, the pelvic measurements, the position of the child, and in the case of a primipara, to ascertain whether from deformity, tumor, etc, it is desirable to induce premature labor or to allow the pregnancy to go to term, relying on forceps, podalic version, Cesarean section or symphyseotomy.

58 **Intestinal Obstruction.**—Grant emphasizes these points: Purgation and opium must be withheld as far as possible until the diagnosis is made Exploratory laparotomy under conditions of reasonable evidence is no discredit, even if it be found to have been unnecessary, because when it is necessary, procrastination means almost certain death.

Interstate Medical Journal, St. Louis

January

68 *Causation and Treatment of Infantile Convulsions E W. Saunders, St Louis
69 *Automobile Fractures S Lange, Cincinnati
70 *How Long Should the Woman Remain in Bed After Normal Labor? F Hinchey, St Louis.

71 *Physical Culture of the Puerperium. G. Gellhorn, St. Louis.
72 *Hygiene of the Mouth, Nose, Pharynx, Intestine, Skin, Mucous Membrane in General: of Lymph Bodies and Lungs. Prevention of Colds. N. P. Barnes, Washington, D. C.
73 The Apparatus Used by the Greeks and Romans in the Setting of Fractures and the Reduction of Dislocations. J. S. Milne, Hartlepool, Eng.

68. See Abstract No. 20.

69. **Automobile Fractures.**—Lange records four cases. He considers it probable that *the automobile fracture* is a subperiosteal one. The accident may be avoided by care in cranking, which should always be done on the upstroke. If the engine fails to start on the first upstroke the handle should be readjusted for the next trial. To guard against premature explosions the sparker should be retarded, which prevents ignition from occurring until the piston has reached the end of the cylinder.

70. **Rest After Parturition.**—Hinchey, from a careful observation and study, arrives at the following conclusions:

1. Early rising is beneficial because the *lying-down position* reverses the normal curve of the utero-cervical canal, conducing to subinvolution and to retrodeviation of the uterus, consequent on the inability to secure uniform anemia and atrophy of that organ.
2. In the early days after labor, there is an absence of unusual tension of the pelvic floor, in the upright posture, because the uterus rests on the pubis.
3. Exercise favors involution of the pelvic structure, so that by the time the uterus has reached the pelvis, these structures can afford the necessary aid to the internal uterine supports, thus preventing prolapse.
4. Hemorrhage and embolism are not to be feared.
5. Early rising affords drainage, which may prevent infection.
6. General metabolism is often impaired by prolonged rest to such a degree that lactation is inhibited and any tendency to invalidism is encouraged.

71. **The Puerperium.**—Gellhorn, as a result of his statistics, traces a large proportion of ailments to faulty management of the puerperium. He holds that a puerpera should stay in bed not less than eighteen days, should wear an appropriate bandage, preferably of the Semlink model, that mild methodical exercises started in the second week after confinement and continued for several weeks after patient has left the bed are indispensable to complete restoration. and that every puerpera should be carefully examined six weeks after delivery before being discharged from medical observation.

72. Abstracted in THE JOURNAL, Nov. 28, 1908, p. 1895.

Montreal Medical Journal

January

74 Cerebral Arteriosclerosis. C. K. Russel, Montreal.
75 Cutaneous Manifestation of Tertiary Syphilis. G. G. Campbell, Montreal.
76 Diagnosis of the Commoner Inflammatory Diseases of the Eye. T. A. Woodruff, Chicago.
77 Pott's Paraplegia Cured by the Plaster Bed. J. A. Nutter, Montreal.
78 Aphasia, Auditory and Motor, with Re-education. N. Viner, Montreal.
79 Medicine in Canada. M. C. Charlton.
80 Practical Considerations in Dealing with Pulmonary Tuberculosis. H. Elliott, Toronto.

Journal Michigan State Medical Society, Detroit

January

81 *Treatment of Syphilis and Parasyphilis of the Nervous System. D. Hecht, Chicago.
82 *Personal Experience with Prostatitis. F. W. Robbins, Detroit.
83 *Three Cases of Lymphatic Leukemia. W. Haughey, Battle Creek.
84 Etiology and Treatment of Nasal Catarrh. J. F. Byington, Battle Creek.

81. **Syphilis of Nervous System.**—Hecht epitomizes his article as follows:

1. Syphilis and parasyphilis of the nervous system continue to stand in direct and indirect causal relation to primary syphilis, although their nosologic *position* is very likely to undergo revision if the Schaudinn discovery and serodiagnostic values of *to-day* stand the test of time and *further development.*
2. The therapeutic position, it is hoped, will also share in this signal advance, but in the expectant interval it is well to insist that neither a routine nor a haphazard administration of antispecifics is commendable.
3. Treatment to be intelligent must meet the requirements of each case, with due regard for the many collateral *chiefly supportive* measures.
4. Antispecifics, when indicated in these conditions, mean mercury and iodids.
5. In *the* vast majority of cases occurring in neurologic practice mercury by inunction is the method of *choice.*
6. The "*Frænkel* exercises treatment for the ataxia of tabes loses none of its efficiency if a departure is taken from the original complex plan to a simpler one.

82. Abstracted in THE JOURNAL, Aug. 29, 1908, p. 786.

83. Abstracted in THE JOURNAL, Aug. 22, 1908, p. 699.

Journal of the South Carolina Medical Association, Greenville

January

85 Public Schools *and* Public *Health.* W. J. Burdell, Lugoff, S. C.
86 Arteriosclerosis. T. A. Quattlebaum, Graniteville, S. C.
87 *Relation of Physicians* to Each Other. J. G. Duckworth, Anderson, S. C.
88 Relation of Physician to Patient. J. M. Richardson, Anderson, S. C.

American Journal of Surgery, New York

January

89 **Acute Dilatation of the* Stomach. C. D. Selby, Toledo, O.
90 *Catarrhal Deafness and its Treatment. A. C. Geyser, New York.
91 Diagnostic Indications of Uterine Bleeding. S. S. Graber, New York.
92 Placenta Prævia Centralis. H. A. Miller, Pittsburg, Pa.
93 Correction of External Nasal Deformities. J. C. Lester, Brooklyn, N. Y.
94 Case of Pulmonary Embolism Following Injection of Salicylate of Mercury *in Alboline.* E. H. Eising, New York.
95 Acute Perforating Gastric and Duodenal Ulcer. E. Eliot, New York.

89. **Acute Dilatation of the Stomach.**—Shelby concludes that many cases of acute gastric dilatation on inquiry will be found to originate in splanchnic stimulation superimposed on some chronic malady of the stomach, and aided by the presence of some fermentative irritant or hypertonic solution in the stomach.

90. Abstracted in THE JOURNAL, Nov. 28, 1908, p. 1990.

Ophthalmic Record, Chicago

January

96 *Treatment of Recurrent Pterygium. H. *Gifford*, Omaha, Neb.
97 Case of Bilateral Fulminating Glaucoma. R. L. Randolph, Baltimore.
98 *Conditions Under Which the Striæ of *Incipient* Senile Cataract Appear and Disappear. L. Connor, *Detroit.*
99 Case of Mikulicz's Disease. R. L. Randolph, Baltimore.

96. **Recurrent Pterygium.**—Gifford contests the opinion expressed by Knapp "that pterygia that have relapsed after one or several operations and have the aspect of keloid scar should not be meddled with." *He reports five cases successfully* treated by the use of sufficiently large Thiersch or epithelial *flaps. His experience* indicates that all of these bad cases of recurrent pterygium can be cured by this means. In doing the operation it is important in dissecting back the conjunctiva to clean the cornea and sclera very *thoroughly and to be* sure that the flap is well attached to the globe before allowing the lids to close. Skin flaps should be very thin and they are best taken from the inner forearm. Their advantage is that they always *remain skin, the statements to the contrary* notwithstanding. On account of not being subject in the eye to the friction which skin generally gets, they do not clean themselves on the eyeball. and the epidermis collected on the surface not only looks bad, but is likely to cause some irritation. But if carefully wiped every day they look well and give no trouble. Lip and flaps have the disadvantage that, no *matter* how *thin* they are cut, they have on the eyeball a slight reddish tinge; they are also more liable to shrink. In practice, Gifford uses lip flaps when, on account of the age or disposition, a slight redness of the eyeball is of no importance, or when he has reason to think instructions as to wiping a skin flap would not be carried out. Slight recurrences in which the conjunctiva grows back on the cornea for a millimeter or two and there stops, require no treatment, but when a pterygium returns and is apparently progressing steadily. a narrow circumcorneal skin flap, as proposed by Dr. F. C. Hotz, will probably effect a cure. Gifford thinks, *however,* that we can generally more surely prevent recurrence by using a somewhat larger flap, applied as shown by one of his illustrations in this article. Of all the operations for pterygium he finds that of McReynolds the one least liable to be followed by recurrence.

98. **The Striae of Incipient Senile Cataract.**—Connor summarizes his considerations as follows:

1. The striated lenses of incipient senile cataract are the *result* of disease, *coincident* with advancing years, but not a necessary

part thereof (more than cholera infantum, club foot or squint are caused by childhood).

2 This disease is the result of general malnutrition and diminished local immunity or failure of the capsule cells to make lens fibers adequate to fill intercellular gaps by shrinkage of cells adjacent the nucleus

3 These striated lenses occasionally become clear, either without or with a great variety of treatment

4 In cases of incipient striated senile cataract, every existing cause of general or local malnutrition should be eliminated, and every known agency of promoting general or local nutrition be utilized, that the lens may regain transparency; or that workable vision be retained for the longest period; or to secure the best possible preparation for the shock and traumatism of extraction.

Woman's Medical Journal, Toledo, O.

January

100 Against the Spirochæta Pallida and Diplococcus of Neisser. H C Putnam, Providence, R I.
101 The Eye and Its Diseases, in Relation to the Work of the General Practitioner. M L Hurrell, Rochester, N. Y.
102 Thyroid Enlargements M E. Dickinson, Rochester, N. Y.

United States Medical Naval Bulletin, Washington

January

103 Artificial Illumination of Naval Vessels—A Study in Naval Hygiene J D Gatewood, U S Navy
104 *Simple Operation for Hemorrhoids H. F. Hull, U. S Navy

104. **Hemorrhoids.**—Hull describes the following operative technic: After dilating the sphincter, grasp the pile well toward its base with a hemostat, the blades parallel with the long axis of the bowel. It may be necessary to draw out the pile with a tenaculum. Take a strand of No. 2 catgut, 8 or 10 inches long and thread on each end of it a full curved or half curved needle. Start to sew at the upper end of the pile—that is, at the distal end of the clamp, entering one of the needles close to and just beneath the hemostat, about one-eighth of an inch from the extremity of the pile. Draw the thread half through. Bring the thread around the free end of the pile and re-enter the same needle through the same hole and from the original side. Thus a loop will be formed about this end. Follow down along the pile, keeping close to and beneath the hemostat with an ordinary shoemaker's or harnessmaker's stitch, with two needles, making the loops or stitches about one eighth of an inch apart This stitch is put in by entering the needles from opposite sides through the same hole and then pulling fairly tight. The last stitch or loop ends one eighth inch from the proximal end of the clamp, and the two ends are simply pulled tight and tied about this end of the pile. Cut the pile off close to the upper surface of the hemostat, and lastly cut the long end of the threads. Repeat this procedure for each pile Should any be very large, angry looking, and "bursting" with blood, a back stitch may be taken at about the center of the pile, first pulling tight those stitches already in. A cautery may be used on the raw edge The after treatment consists of a suppository of opium and belladonna, a rectal plug of gauze, and rubber dam wrapped about a piece of tubing and left in for two or three days. As soon as the plug is removed an oil enema is given.

Alabama Medical Journal, Birmingham

January

105 Successful Case of Endoaneurismorrhaphy. C. Whelan, Birmingham, Ala
106 Sexual Neurasthenia. R C. Bankston, Birmingham.

Chicago Medical Recorder

January

107 *Advisability of Operations During Shock. S C. Plummer, Chicago
108 *Treatment of Syphilis and Parasyphilis of the Nervous System D Hecht, Chicago
109 *Relation of Influenza Bacillus to the Disease Influenza. W. S Harpole, Chicago
110 Abuse of Medical Charities in Chicago. C. J. Whalen, Chicago
111 Untoward Results of Middle Ear Disease H. M Hays, New York
112 Rhachitismus—A Clinical Study A. C. Wiener, Chicago

107 **Operation During Shock.**—Plummer analyzes the expressions of various authorities on the question of operation during shock, and concludes as follows: Do not operate during shock as a rule. Before making exception to this rule, weigh carefully any rare and unusual case under your care; do not too hastily decide that a deviation from the ordinary practice is justified.

108. See Abstract No. 81.

109. **Influenza Bacillus.**—Harpole traces the history of influenza from 1510, and analyzes the opinions of many physicians thereon. He says that the situation to day seems to be that we have:

1 Many cases of respiratory disease and febrile disease, in which the influenza bacillus is found in the throat cultures or sputum. These may or may not be cases of influenza of a mild type

2 There are occasionally cases of severe infection of the body or its various systems in which the course is severe, and even fatal, and the organism found deep in the tissues is unmistakably the influenza bacillus. These cases seem to be undoubted cases of influenza

3 The germ is found in cases of well marked whooping cough, scarlet fever, measles, etc, in which the importance of its presence is a question

4 It is also found in healthy mouths

It would seem reasonable to believe that the influenza bacillus is a constant guest with us, producing sporadic, and at times epidemic, cases, and at periods, for reasons not understood, gaining a virulence at some point on the earth's surface from which the virulent colonies spread with great rapidity into a pandemic.

Providence Medical Journal

January

113 Vomiting E E Pierce, Providence
114 Peculiarities of the Stools of Young Children. F. G. Taggart, East Greenwich, R I
115 Three Cases of Glaucoma V. L Raja, Providence.

St. Louis Medical Review

January

116 *Blood Cultures in Typhoid L K Baldauf, St Louis
117 New Laboratory of the University of Berlin J. W Marchildon, St Louis.
118 Carcinoma of the Body of the Uterus C C. Vanderbeck, St. Louis
119 *The Marriage of the Blind from the Standpoint of a Physician C Loeb, St Louis
120 Development—Physical, Mental, Moral. H C. Fairbrother, St Louis

116. **Blood Cultures in Typhoid.**—Baldauf discusses the subject in general, dwelling particularly on the work of Coleman and Buxton (*American Journal of Medical Sciences*, June, 1907) whose conclusions he quotes. He has himself been making systematic and routine examinations at the St. Louis City Hospital in suspected typhoid cases, with a view to determining the frequency of bacillemia in typhoid infection and isolating different organisms from several individuals, for he is in agreement with those who believe that there are numerous strains of the typhoid bacillus and that the severity of the symptoms is dependent in many cases on the variety of the organisms. He has used in his work almost exclusively ammonium oxalate solution and Conradi's medium. He describes the technic.

119. Practically the same article, with identical conclusions, was published in the *Annals of Ophthalmology*, January, 1909, and abstracted in The Journal, February 20, page 663.

Southern California Practitioner, Los Angeles

January

121 Case of Subcutaneous Abscess Caused by the Sporothrix Schenckii J M Burlew, Santa Ana, Cal
122 Bismuth Paste in Diagnosis and Treatment of Fistulous Tracts J K Swindt, Pomona, Cal
123 Intravenous Injections in Tuberculosis C. A Shepard, Needles, Cal
124 *Eclampsia, Toxemia and Uremia of Pregnancy. F. H. Redewill, Phoenix, Ariz
125 Climatology of the Southwest J A Munk, Los Angeles
126 Care of Tuberculosis Patients at the Los Angeles County Hospital D C Barber, Los Angeles

124. **Eclampsia.**—Redewill reports experimental work which demonstrates conclusively, in his opinion, that in every case examined the placenta of an eclamptic woman was highly toxic. Glycerin extracts were made from both the *maternal* and *fetal* portions The fetal extract in 70 per cent. of the cases showed no toxic effect up to ten times the unit of dose, while those injected with the maternal portion containing syncytium showed extreme toxic effects with one unit in every case. Redewill holds that we can accept, therefore the syncytial theory of the origin of the toxin of eclampsia The pathologic lesions of eclampsia are primarily necrosis of the periphery of the liver lobules with secondary lesions in the kidneys and brains In pernicious toxic vomiting of pregnancy, as in acute yellow

atrophy, but less intense, the lesions are principally in the center of the liver lobules. Acute uremia of pregnancy, though of kidney origin, is indirectly produced by torpid activity of the hepatic cells. In determination of kidney and liver activity, the urea and ammonia quantitative tests are far more important than the searching for casts and albumin. To determine, directly, the liver activity, Strauss' levulose test is recommended. In eclampsia with a soft dilated cervix, the uterus should be emptied at once; with a hard, non-dilated cervix, dependence must be on laboratory as well as clinical evidence to determine the condition of patient, and if in critical condition, forcible dilatation and extraction or aseptic Cesarean section is called for. Anesthetics and morphin should be used sparingly. Venesection should be performed in most cases, low pulse alone not being a contraindication (Williams), and hypodermoclysis should be administered.

Ohio State Medical Journal, Columbus

January

127 *Sciatic Pain as an Orthopedic Symptom. A. H. Freiberg, Cincinnati.
128 Management of the Third Stage of Labor. E. W. Doherty, Toledo.
129 Relation of Diseases of Accessory Sinuses of the Nose to Eye Symptoms. J. W. Murphy, Cincinnati.
130 *Potentiality of Habit. C. B. Mills, Marysville.
131 Adherent Prepuce. J. C. Larkin, Hillsboro.

127 and 130. Abstracted in The Journal, May 23, 1908, pp. 1721, 1723.

Journal of Nervous and Mental Disease, Lancaster, Pa.

January

132 Three Cases of Facial Spasm Treated by Injections of Alcohol. H. T. Patrick, Chicago.
133 *Psychotherapy and the Church. C. B. Farrar, Baltimore.
134 *Hysterical Insanity, with a Special Consideration of Ganser's Symptom Complex. T. Diller and G. J. Wright, Pittsburg, Pa.

133. **Psychotherapy and the Church.**—Farrar criticizes the Emmanuel movement from a materialistic standpoint.

134. Abstracted in The Journal, July 4, 1908, p. 69.

Journal New Mexico Medical Society, Albuquerque

January

135 Head Injuries. J. R. Espey, Trinidad, Colo.
136 Traumatic Lesions of the Spinal Cord. J. W. Colbert, Albuquerque.
137 Routine Examination of Eyes, Ears, Nose and Throat in School Children. C. S. Losey, East Las Vegas.

Mississippi Medical Monthly, Vicksburg

January

138 Postpartum Hemorrhage. A. P. Alexander, Sledge.
139 Obstetrical Observations. F. M. Brougher, Belen.
140 Etiology of Malarial Hematuria. C. J. Marshal, Lambert.
141 Uses of Digitalis. G. S. Johnson, Belen.

Journal of Medical Research, Boston

December

142 Bacteriolysis of the Gonococcus and of the Meningococcus with Normal and Specific Immune Rabbit Serums. J. C. Torrey, New York.
143 I.—New Para-Dimethyl-Amido-Benzaldehyde Test for Indol. II.—Cholera-Red Reaction as Affected by Mixed Cultures. E. N. Tobey, Boston.
144 Modification of the Technic of Complement Fixation. A. H. Caulfeild, Toronto, Canada.
145 Typhoid Meningitis: Cultivation of *Bacillus typhosus* from Meninges and Mesenteric Lymph Node in a Case of General Paresis, with Note on Experimental Typhoid Meningitis in the Guinea-Pig. E. E. Southard and E. T. F. Richards, Boston.

January

146 *Immunity Production by Inoculation of Increasing Numbers of Bacteria, Beginning with One Living Organism. G. B. Webb and W. W. Williams, Colorado Springs, Colo.
147 *Large White and Soapy Kidney. O. Klotz, Montreal.
148 Origin and Development of Foreign Body Giant Cells. A. Forbes, Boston.
149 *Later Stages of the Repair of Kidney Tissue (Dog), with Special Reference to Proliferation of the Pelvic Epithelium and Heteroplastic Bone Formation. R. M. Pearce, New York.
150 *The Increased Infective Power Produced in Bacteria by Sensitization with Normal Serum of the Same Species. W. C. White and D. A. L. Graham, Pittsburg.
151 *Value of the Use of Ammonium Oxalate in Blood Culture Technic. C. Ruttenberg, Boston.
152 *General Susceptibility in Typhoid and Colon Infection, as Shown by the Ophthalmic Test. C. Floyd and W. W. Baker, Boston.
153 *A Mucin-Containing Multilocular Cyst of the Ovary. G. McConnell, St. Louis, Mo.

146. **Immunity Production by Inoculation.**—From their work on guinea pigs Webb and Williams conclude that some immunity is produced by beginning with a subcutaneous inoculation of one tubercle bacillus and slowly going up. They regard the method as harmless and suggest that it may prove beneficial in the treatment of established tuberculosis.

147. **Large White or Soapy Kidney.**—In the so-called large white kidney, Klotz finds myelin which contains fatty acids in combination with sodium and potassium—soaps of oleic acid. He could not demonstrate proteids or cholesterin. The large white kidney has usually been considered as fatty kidney, but in reality it would be more of a soapy kidney according to these results.

149. **Repair of Kidney Tissue.**—Pearce finds that in the repair of kidney tissue at the site of injury caused by partial extirpation there is, as a rule, proliferation of the epithelium of the pelvic mucosa and in the underlying connective tissue heteroplastic bone formation may take place.

150. **Increased Infective Power in Bacteria.**—White and Graham cite experiments which appear to them to indicate that the treatment of normal tubercle bacilli with normal rabbit serum increases the infective power of the bacilli for rabbits.

151. **Ammonium Oxalate in Blood Culture Technic.**—Ten cubic centimeters of the following solution, ammonium oxalate 2 grams, sodium chlorid 6 grams, distilled water 1,000 c.c., are put into large test tubes and sterilized for twenty minutes on each of three successive days. The tubes are stored in the ice chest until needed, but fresh solutions should be made every third or fourth week. The oxalate precipitates the calcium salts of the blood thereby preventing coagulation. In the actual work of making blood cultures, from 4 to 8 c.c. or so of blood are introduced into a tube of the oxalate solution and thoroughly mixed together, and this mixture may be used for making plates and inoculating various media. The method is useful as an intermediate step in blood culture, because it permits transportation of the blood from the bedside to the laboratory.

152. **General Susceptibility in Typhoid and Colon Infection.**—Floyd and Barker used a solution of typhoid bacilli prepared according to the method originally employed by Hamburger: The bacilli are grown on agar for twenty-four hours and then suspended in salt solution and the suspension is incubated for four days in order that autolysis may take place. The solution is then sterilized at 60 C. for half an hour, centrifugated for twelve hours and the clear supernatant fluid pipetted off. Hamburger used a solution representing three billion bacilli to the cubic centimeter, but Floyd and Barker regard this solution as too active and use one representing one billion bacilli per cubic centimeter. The test is simple and without danger and gave a definite positive reaction in 96 per cent. of the series studied, often several days before the agglutination reaction could be obtained. Floyd and Barker also studied a colon ophthalmic reaction carried out in the same way as the typhoid, but further work is necessary before its diagnostic value can be established.

153. Abstracted in The Journal, Jan. 30, 1909, p. 409.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

January 30

1 *Physiology and Pathology of Work in Compressed Air. Sir T. Oliver.
2 *"Bacillus F": An Organism in a Case of Epidemic Diarrhea. J. Orr, R. S. Williams, H. L. Murray, C. Rundle and A. E. Williams.
3 Primary Squamous-Celled Epithelioma of the Epididymis. R. P. Rowland and G. W. Nicholson.
4 *The Parasite of Kala-Azar and Allied Organisms. W. S. Patton.
5 The Treatment of Syphilis. G. G. S. Taylor.
6 A Typhoid Carrier, Treated Successfully by Inoculation of Typhoid Vaccine. S. T. Irwin and T. Houston.

7 Modification of Excitant for Leucocytes Composed of Methylene Blue and Atropin. H. C. Ross.
8 *Tuberculosis in Children. T. Shennan.

1. **Compressed Air.**—Oliver gives the results of his experience of compressed-air illness, gained during three extensive engineering enterprises in the north of England. He describes the caisson, the phenomena of compression, and the method of decompression when the men leave the caisson. The length of time spent by the men in the working chamber should be inversely proportional to the pressure. The symptoms generally develop after men have come out of the air-lock. There are sudden onset of pains in limbs or abdomen, sickness and vomiting, dizziness, bleeding from the nose or mouth, nervousness, often amounting to terror, unconsciousness, and even paralysis, which last, however, usually passes away, though in one of Oliver's cases the paralysis, which was accompanied by loss of sensation, became permanent. He discusses the explanations that have been given of the causation of the symptoms, the physiology, pathology, prevention and treatment. As to the last, recompression, followed by subsequent slow decompression, appears to be the most effective measure. Working in compressed air should be done only by comparatively young men who are temperate, of spare build, and whose tissues are still elastic.

2. **A Bacillus of Epidemic Diarrhea.**—The authors describe the morphology, staining reaction, cultivation and agglutination experiments, and the results of animal inoculations and feeding experiments in reference to a bacillus recovered from the stools in an epidemic of diarrhea. It is readily differentiated from the *Bacillus typhosus* and other definitely known morbific bacilli, such as Morgan's and the dysentery bacilli. The agglutination reactions appear to show a relation between it and the *Bacillus typhosus* and the paratyphoid bacillus B.

4. **Kala-Azar.**—Patton essays to show that the parasite of kala-azar is a herpetomonad, and that in its flagellate stage it may be indistinguishable from a harmless species; this truth is of importance, because in spite of other data the two closely allied human forms—the parasites of infantile splenomegaly and oriental sore—are still regarded as identical with the parasite of kala-azar.

8. Abstracted in The Journal, Oct. 17, 1908, p. 1366.

British Medical Journal, London

January 30

9 *Physiology and Pathology of Work in Compressed Air. Sir T. Oliver.
10 *Uses of the Calcium Salts in Various Morbid Conditions. A. P. Luff.
11 *Use of Alkalies in Practical Medicine. E. Smith.
12 Remedial Use of Alcohol. J. MacDonald.
13 Operation at End of Fifth Month for Extrauterine Gestation with Living Fetus. A. Doran.
14 Tubal Pregnancy with Early Operation. H. F. Warner.
15 Perforative Peritonitis Following Typhoid Fever: Operation. Recovery. H. B. Mylvaganam.
16 *Method of Measuring the Systolic Pressure in Man, and the Accuracy of This Method. L. Hill and M. Flack.
17 *Treatment of Inoperable Cancer by Hypochlorites. J. E. A. G. Becker.
18 *Treatment of Cancer with Cocain. R. M. Gilchrist.

9. See Abstract No. 1.

10. **Calcium Salts.**—Luff cites Wright's observations that deficient blood coagulability does not always manifest itself in actual hemorrhages, but may show instead an increased transudation of plasma through the capillary wall—"serous hemorrhage." Examples are urticaria, chilblains, edema of the feet and hands, not due to cardiac, renal or venous troubles, and a certain form of headache known as the lymphatic type. This last occurs more frequently in women, usually as a heavy dull ache in the frontal region, occasionally as a throbbing pain in the frontal and temporal regions. It commonly appears on awaking in the morning, and diminishes in intensity or disappears after a few hours. It is most intractable. The subjects of it are usually of the lymphatic type, with a tendency to slight edema of the face, eyelids, hands and feet. Ross suggested the administration of a calcium salt to increase the coagulability of the blood, and demonstrates that the decalcification of the blood, with consequent diminution of coagulability, which can be brought about by potassium citrate, caused a reappearance of the headaches. During nine years Luff has treated 121 cases of deficient blood coagulability with calcium salts, usually with the best effects. The conditions treated included headache, chilblains, boils, urticaria, flushing of the face, aneurism of the aorta, hemoglobinuria, edema of the feet on exertion, vesicular or bullous eruptions, and certain skin conditions—erythema, lichen-planus, gouty pruritus, pruritus ani, and offensive perspiration. He uses for adults calcium lactate, 15 grains (1 gram) in a fluid ounce of chloroform water, with from a half to one minim of tincture of capsicum, three times a day, one hour before meals. The constipation caused by the drug must be controlled, for which purpose salines should not be used, owing to their precipitant action on calcium salts. He has found an effusion of senna pods taken at bed time the most useful laxative.

11. **Alkalies in Medicine.**—Smith says that valuable and widely used as alkalies are in medicine, they must be used with discretion, for appropriate conditions, and on a definite plan. Taken before meals they have a local action. They should be prescribed only in moderate doses and be discontinued as soon as their administration has ceased to be obviously beneficial. They have a local action, both on the stomach and bowels, which, however, appears to be due not so much to their chemical action on the gastric contents as to their undoubted influence in restoring the deranged mucous membrane to a normal condition. Their effect is not limited to this local action, however, for, when used with judgment, they seem to have the power of influencing the whole system for good and setting up a favorable change, which is not always a merely transitory improvement. In gastric derangements, sodium and potassium bicarbonate are probably equally good. From 10 to 20 grains are usually sufficient for adults (for children, from 5 to 10 grains), and it adds to the curative value to combine in each dose a few grains of sodium chlorid. Smith finds the addition of two or three minims of tincture of colchicum seeds, useful in cases of dyspepsia. If there is great irritability of the stomach the alkalies should be made to effervesce with citric acid. The caustic alkalies—liquor potassæ and liquor sodæ—have a more decided sedative action on the stomach than the bicarbonates. Long courses of alkalies are rarely of service in the management of ordinary flatulent dyspepsia. In addition to the salts of potassium and sodium, the heavy carbonate of magnesium and calcium carbonate are very useful. When the object is to neutralize the acid in the cecum the insoluble alkalies are to be made use of, for these are likely to pass unaltered through the stomach and reach the lower bowel unchanged. Smith discusses the uses of alkalies in the treatment of urinary acidity and the discharge of sand and gravel, in the painful cramps which often affect the habitual dyspeptic, especially at night, in suppression of urine, in viscid bronchitis, and the use of sodium citrate in infant feeding.

16. **The Systolic Pressure in Man.**—Hill and Flack, in view of the doubt recently expressed as to the accuracy of the obliteration method of measuring the systolic blood pressure, have tested it in man in two different ways, and both ways, so far as the authors' tests go, show that the method is an accurate one. They describe the methods.

17. **Inoperable Cancer.**—Becker reports three cases of inoperable cancer in which great improvement followed treatment by injection of a solution of potassium and sodium hypochlorite. The periods elapsing between the recognition of the condition and the date of writing—at which period each patient was apparently in good health—are five and one-half years, eighteen months and over four years. The diagnosis was verified microscopically in 2 of the 3 cases. The solution is prepared by dissolving 5 grams of potassium hydroxid and 4 grams of sodium hydroxid in a liter of distilled water, and passing it through washed chlorin gas. Of this solution, 1.5 to 2 c.cm. were injected daily for a varying period, usually under the skin over the deltoid muscle or over the great trochanter, so that the solution might enter the system at a site in the general neighborhood of the lymphatic glands. The growth itself and the skin over it were carefully avoided. So, too, was the use of alcohol during treatment.

18. Cocain in Cancer.—Gilchrist reports fourteen cases of various forms of cancer, mainly uterine or breast, treated by cocain administered internally, and where practicable applied locally also. The author makes the following remarks:

1. In every case the general constitutional condition of the patient was very much improved, even if only for a time.
2. From the observations made in these cases, it may be considered, so far as the relief of pain is concerned, that cocain stands unrivaled, for while easing, or altogether taking away pain, there are none of the objectionable conditions which opiates produce.
3. In every case of uterine cancer in which hemorrhage was a prominent symptom, the administration of cocain was followed by immediate benefit; either stopping the flooding entirely or leaving only at intervals a show.

Medical Press and Circular, London

January 27

19 *Peroneal Type of Muscular Atrophy. A. Whiting.
20 Incontinence of Urine Associated with Epispadias. R. P. Rowlands.
21 Ten Cases of Operation for Perforated Gastric Ulcer. C. Morton.
22 Some Gonorrheal Diseases of the Eye. S. Stephenson.

19. Peroneal Type of Muscular Atrophy.—Whiting summarizes the pathologic findings of the more recent investigations by saying that several have found degeneration of peripheral nerves, muscles and posterior columns of the cord; some have found lesions both of the posterior horns and the anterior horns, and a few have observed a hypertrophy of the interstitial substance of the nerves. Muscular atrophy is by no means unknown in unequivocal cases of tabes dorsalis. As to sex frequency, it is usually said that males are more frequently affected than females as five to one, but in the case of the family he describes in his paper that does not appear to be the case; indeed, the heredity seems to follow the rule in certain other nervous disorders of transmission, from the mother to the son, and the father to the daughter. In reference to etiology, it is clear that there is an inherited vulnerability, to say the least, of nearly the whole of the lower nervous system, and, indeed, possibly also of the higher, as an erratic, bizarre, excitable psychology is held by some to be characteristic of the disease. In this respect it seems closely to resemble Friedriech's hereditary ataxia. In addition to this predisposing cause, there is clear evidence that in many cases there is also an exciting cause, usually in the form of some acute, specific fever, particularly, as the case records seem to suggest, measles; but other toxic agents such as alcohol and lead, have been held to participate, and even conditions of muscular and mental stress have seemed to have a share in the development of the disease. Up to the present, effective treatment may be summed up in almost a word, namely, well-directed tenotomies; any other is of little avail.

Clinical Journal, London

January 27

23 Appendicitis and Its Treatment. T. H. Openshaw.
24 Diseases, Not of the Stomach, Which Are Liable to Produce Misleading Gastric Symptoms. A. E. Maylard.

Journal of Tropical Medicine and Hygiene, London

January 15

25 Trypanosomiasis and the Geographic Distribution of Some of the Blood-Sucking Insects. J. E. S. Old.
26 Hemogregarines of Snakes (to be continued). L. W. Sambon.

Annales de l'Institut Pasteur, Paris

December, XXII, No. 12, pp. 929-1020

27 *Research on the Intestinal Flora. E. Metchnikoff.
28 *Ankylostomiasis and Beriberi in Cochin China. F. Noc. Commenced in No. 11.
29 Filtration of Certain Proteolytic Diastases Through Collodion Membranes. F. Strada.
30 Piroplasmoses of Cattle in Indochina. H. Schein.

27. The Intestinal Flora.—Metchnikoff protests against Finkelstein's conception of the intestinal disturbances of infants as due exclusively to dietetic disturbances—alimentary intoxication. Finkelstein's main argument is that this alimentary intoxication is not connected with any special bacterial flora, as he found this so diverse in the different cases, while the influence of the food was constant and pronounced. Metchnikoff points out that the secretions of the bacteria differ with different food; if a little fecal matter is placed in two tubes, one of which contains chopped meat in water and the other chopped vegetables in water, the fluid in the first jar after two days becomes extremely poisonous for rabbits, while the fluid in the second is entirely harmless for them. The bacterial products are thus different in the two tubes, although derived from the identical source. He then reports personal research on the microbes of putrefaction and their toxic products, especially the anaërobes, *Bacillus putrificus* and *B. perfringens* or *welchii:* He has demonstrated that these anaërobes are a source of autointoxication against which the organism should struggle with all the means at its disposal. It is precisely during the first few days of the development of these putrefaction anaërobes that their products are the most intensely toxic. This is interesting in view of the frequently proclaimed fact that the putrefaction in the intestine is only the first stage of the putrefactions observed outside the human body. He shows further the analogy between the proteolytic flora in the intestine and putrefactions in general, wherever encountered, and states that this constitutes a new argument in favor of the pathologic importance of the putrefaction microbes in the human organism.

28. Beriberi Due to the Ankylostomum.—Noc is convinced that the *Necator americanus* is partially responsible for the syndrome known as beriberi, its action supplemented by the lack of sufficient nourishment. The toxic secretions of the parasite seem to accumulate in the system and render the blood serum hemolytic. Repeated ingestion of the larvæ of the hookworm plus the usual Annamite diet is liable to induce the syndrome of beriberi. Thymol cures the disease readily and completely when it is of recent origin, but it is useless when the lesions of degeneration are far advanced. Intoxication from the ankylostomum in its various forms is an extremely serious endemic in the Orient. Prophylactic treatment of ankylostomiasis and improvement of the ordinary diet, which contains too little nitrogen and fat, will aid in exterminating this scourge. When carefully treated with thymol and the reflexes fail to return promptly, the patient must be regarded as incurable. He gives the thymol in two doses of 4 gm. or 6 gm. (60 or 90 grains) each, with an interval of from four to eight days; each dose is preceded by a jalap or calomel purge, the patient being on a strict milk diet, careful to refrain from castor oil and alcohol. He has applied this treatment in numerous cases of beriberi; 47 out of one series of 58 patients were cured and 5 others failed to complete the course. The hospital at Choquan has had from 410 to 1.227 beriberi patients every year since 1900, the mortality ranging from 22.14 to 41.61. A number of young men under 25 had the paralytic or mixed form, with pain in the legs and loss of the knee-jerk, but little or no edema, only a few weeks having elapsed since the onset of the disease. All these patients were promptly and completely cured. In the older cases the lesions of the nerves, heart, lungs and liver proved irreparable.

Annales de Médecine et Chirurgie Infantiles, Paris

January 1, XIII, No. 1, pp. 1-36

31 *Undescended Testicles. (L'ectopie testiculaire.) Villemin.
32 Rectal Injections of Seawater in Treatment of Infantile Gastroenteritis. (Nouveau mode d'administration du sérum de Quinton dans les gastro-entérites infantiles.) E. Gaujoux.
33 *Asystoly in Children. (Asystolie chez les enfants.) A. Moussous.
34 *Treatment of Burns. (Traitement des brulures.) J. Lucas-Championnière.

31. Diagnosis and Treatment of Undescended Testicles.—Villemin does not advocate operating on very young children free from complicating hernia or pain or when the testicle is in the abdomen or behind the peritoneum. On the other hand, he operates when there is concomitant hernia or pain as soon as the child has learned not to soil himself. There is little prospect after the age of 10 for spontaneous descent of the testicle. If the testicle slides into some other abnormal location intervention should not be delayed. Gentle, slow massage, frequently repeated, may sometimes force the testicle down into the scrotum. In case of failure, operative measures are indicated when the child is approaching the age of 10. The tendency to hernia must be corrected and the fibrous tissue retaining the testicle must be severed. The best way to retain the testicle in the scrotum is to unite it with the other testicle. Then any attempt of one testicle to slide back upward is prevented by the other testicle as they reach the root of the penis. He has done this operation more than three hundred times since 1899, and the results have been very satisfactory. Of course the operation is unable to render functionally perfect a congenitally defective testicle, but in every case the pain and the nervous symptoms were abolished.

33. **Asystoly in Children.**—Moussous regards the localization of the disturbances in the liver and the more rapid course as the special characteristics which distinguish asystoly in children from that in adults. When there is pericardial adhesion the liver dominates the syndrome to such an extent as even to divert attention from the heart. The defective functioning of the liver and the hampered portal circulation entail serious digestive trouble and ascites follows. Repeated punctures may relieve and prolong life for a year or so; a few cases are on record of survival for eight or ten years. The rheumatism or tuberculosis responsible for the asystoly in the first place adds its injurious action on the peritoneum, and the child is liable to fall an easy victim to some intercurrent infection.

34. **Treatment of Burns.**—Championnière protests against the usual treatment of burns with irritating substances which aggravate the condition or permit intoxication from absorption of drugs applied to the wounded area. For this reason he never allows a sedative to be applied to the burn; if one is absolutely necessary, he prefers an injection of morphin. He cleanses the region around with a hot strong solution of carbolic acid, empties the blisters, and swabs the burned surface with a sponge dipped in a carbolic acid solution but so lightly as not to tear the epidermis. A piece of linen in which holes have been cut is spread with a salve and applied to the burned area; over this is laid another piece of linen and cotton to keep out the air, then a bandage to hold all in place. The cotton must be changed every day without fail. Great care should be taken to preserve the epidermis. The salve he has been using for years is petrolatum, 100 gm. (3 ounces), with 15 drops each of essential oil of thyme, of geranium, of vervain and of origanum. This mixture has a soothing and disinfecting action and promotes rapid healing. When unable to obtain the ingredients for this he uses a mixture of 100 parts petrolatum with 10 parts pulverized boric acid and 1 part balsam of Peru. Years of experience have confirmed the value of this technic. He adds that impregnation of a large eschar with zinc chlorid will ward off infection of the eschar, and that tar may prove useful as an application to parts doomed to mortify.

Presse Médicale, Paris

January 16, XVII, No. 5, pp. 33-48

35 *Suprapubic Prostatectomy. (Prostatectomie sus-pubienne.) G. Marion.
36 The Outlook for Pharmacodynamics. (Le devenir de la pharmacodynamie.) A. Martinet.
37 *Recurring Coryza and Autointoxication. P. Cornet.
38 *Action of Gonococcus Vaccine in Gonococcal Joint Affections. (Action du vaccin gonococcique sur les arthrites à gonocoques.) C. Mainini.

January 20, No. 6, pp. 49-56

39 Light Colored Liver Cells. (Les cellules hépatiques claires. Leur nombre relatif à l'état normal. Leur charge glycogénée.) A. Gilbert and J. Jomier.
40 Variations and Measurement of Muscle Tonus. The Myotonometer. P. Hartenberg.

35. **Suprapubic Prostatectomy.**—Marion discusses the indications and contraindications for prostatectomy, and reviews the technic by the suprapubic route, advocating permanent drainage by means of a short piece of wide rubber tubing to the side of which is fastened the sound connected with the irrigator. An elbow-shaped glass tube fits into the short wide drain tube; the latter is perforated near the bottom. The outer end of the glass tube is fitted with a rubber tube conveying away the fluids when the drain is inserted in the bladder through the suprapubic incision. A retention catheter is liable to become plugged with clots, which danger is avoided with this method of drainage, which also does away with the contact of the catheter against the raw surfaces. As soon as the patient is returned to bed the continuous irrigation is commenced; from 20 to 40 quarts or more of cold boiled water are allowed to flow through the drain into and out of the bladder each day. It should be arranged in such a way that the dressings are kept dry and thus do not need renewing for three or four days at a time. The irrigator is placed two or three feet above the level of the bed, the flow being controlled by a clamp in the tube. If the outflow becomes arrested, clots must have got into the drain tube; by removing the glass elbow it is possible to fish up the clots in the drain with forceps. The continuous irrigation not only washes out clots and arrests hemorrhage, but it prevents infection from stagnating urine and clots in some raw pocket. He keeps up this irrigation for three, five or ten days, substituting a smaller, right-angled drain when healing is progressing smoothly, and then he commences to rinse out the bladder daily through the urethra. It is easy for the catheter to go astray behind the spur left from the prostate, and he warns that a guide is necessary to ensure its safe entrance into the bladder. He has treated 18 patients in this way, with invariably good results. One of the men insisted on pulling out his tubes and going to the toilet room every day, and his convalescence was unusually brief. As a rule, Marion lets his patients get up on the eighth or twelfth day. This continuous irrigation has robbed prostatectomy, he is convinced, of its former seriousness. One of the proofs of this is that the other "prostatics" clamor for an operation when they see the excellent condition of those operated on. The operation itself, he adds, is by no means so important as the after-care. The article is illustrated.

37. **Recurring Coryza a Manifestation of Autointoxication.**—Cornet presents numerous arguments to sustain his view that recurring coryza, from simple "colds in the head" to pronounced hay fever, is merely one of the manifestations of the arthritic diathesis, that is, of a family tendency to sluggish elimination of waste products and toxins. He points out that the mucosa of the nose is an excreting organ, and the excretion through this mucosa of some of the toxins generated in the digestive tract may be one factor in recurring coryza. He has had a number of instances in his experience in which an error in diet was promptly followed by an attack of coryza. It is like the congestion observed in the face during difficult digestion. Reflex irritation from the digestive tract distends the vessels, heats and reddens the face, and by stimulating the glands renders the skin greasy and pimply. This same process in the nasal mucosa induces swelling, congestion and excessive secretion; the nerve fibers in the mucosa become irritated from the recurring or continuous autointoxication and the consequent hyperesthesia renders them peculiarly sensitive to dust inhaled or changes in temperature. He has found regulation of the diet, especially avoidance of meat and alcohol, the most effectual means of curing such patients. A little white meat at noonday is all he allows. If local measures are deemed necessary, he applies the actual cautery to the hypersensitive points. The cauterization must be deep enough to destroy the nerve filaments, but this alone is futile unless the underlying autointoxication is combated. The hypersensitive points in the nose are mainly the protruding points where lodge the inspired dust and microbes.

38. **Antigonococcus Vaccine and Gonococcal Arthritis.**—Mainini describes the simple technic for making the vaccine from an emulsion of gonococci, and then reports its application in six cases. It arrests the pain in the true gonococcus arthritis, but it did not seem to modify the course of the affection. He suggests that this specific action on the pain might be useful for differentiation in dubious cases of joint affections.

Semaine Médicale, Paris

January 20, XXIX, No. 3, pp. 25-36

41 Behavior of Spleen and Liver in Acute Malaria. (Le syndrome spléno hépatique dans le paludisme aigu.) A. Chauffard.

January 27, No. 4, pp. 37-48

42 Inhalation the Only Possible Source of Tuberculosis of the Lungs in Nearly Every Instance. (Impossibilité de la propagation de la tuberculose au poumon par la voie lymphatique.) J. Lhermitte.

Archiv für Kinderheilkunde, Stuttgart

XLIX, Nos. 1-4, pp. 1-320. Last indexed July 4, 1908, p. 82

43 Lactalbumin. (Zur Geschichte und Kenntniss des Milchalbumins.) P. Bergell. Id. (Versuche mit Albulactin bei künstlich genährten Säuglingen.) J. Cassell and H. Kamnitzer.

44 *Tuberculin Reactions, Especially the Ear Reaction. (Aurikuloreaktion.) V. Tedeschi.

45 Obscure Cases of Infectious Intestinal Affections. (Enteritis, Dysenterie, Pseudodysenterie, Paratyphus, Typhus, etc.) A. Baginsky.

46 *Albuminuria From Curvature of the Spine. (Ueber lordotische Albuminurie.) H. Nothmann.

47 Treatment of Paralytic Talipes Equino-varus. W. Sochaczewski.

44. **The Ear Tuberculin Reaction.**—Tedeschi uses the extremely vascular and comparatively transparent surface of the ear for application of the tuberculin to induce a specific local reaction. Its absolute harmlessness commends this technic, he says, while the test has the advantage of precision and allows better recognition of the specific induration in the depths of the tissues; the whole reaction seems to be more typical and permits more accurate dosage.

46. **Curvature of Spine Responsible for Orthostatic Albuminuria.**—Jehle announced a short time ago that he had found more or less curvature of the spine in all the cases of "orthostatic" albuminuria in his experience, and believed that the curvature was responsible for the albuminuria. This assumption was confirmed by the fact that he succeeded in inducing the "orthostatic" albuminuria in healthy children, previously free from any such tendency, by merely artificially inducing a curvature in the spine. When the children sit or recline, there is no lordosis and the kidneys functionate normally, but when they stand up, the weakness of the muscles causes the spine to curve in the lumbar region and the kidneys have to work under abnormal conditions on that account. If the muscles are strengthened or supported, the sole of the shoe made a little thicker or a supporting corset worn, the tendency to albuminuria is corrected. Nothmann states that he has witnessed the development of ablumminuria in cases of progressing lordosis, and has also succeeded in inducing the production of albuminuria by artificially induced lordosis. He reports a number of cases of children convalescing from scarlet fever with traces of kidney disturbance; in all such cases albuminuria promptly followed when the spine was artificially incurved. In another series of scarlet fever children it was impossible to elicit albuminuria by the artificial lordosis, and the kidneys of these children at the time and later have always been apparently absolutely healthy. He has been experimenting on rabbits and on the cadaver to see the effect on the kidneys of curvature of the lumbar spine, and has found that the incurved vertebræ protrude into the space between the kidneys, push them apart and twist them around on the vertical axis, amply explaining the disturbances in circulation evidently responsible for the albuminuria. He thinks it should properly be called "lordotic albuminuria" instead of "orthostatic." If the kidney is at all pathologic, albuminuria is more readily induced than in a sound organ.

Berliner klinische Wochenschrift

January 25, XLVI, No. 4, pp. 141-188

Fatal Hemoptysis from Bursting of Aneurisms in Non-tuberculous Bronchiectasis. H. Chiari.

27 [illegible]reatment of Rhinoscleroma with Roentgen Rays. A. R. Rydygier, Jr.

28 [illegible] Visual Inspection of Sigmoid Flexure. (Zur Sig[illegible]opie.) H. Strauss.

29 [illegible]osis of Syphilis. C. Bruhns and L. Halberstaedter. [illegible]elrowsky.

30 I[illegible] of Strictures in the Urethra. (Behandlung [illegible]arnröhrenstrikturen.) J. Cohn.

[illegible] of Antipyritic Power of Blood. (Verbessertes [illegible]r Bestimmung der antitryptischen Kraft des [illegible]cus.

[illegible] Leukemia. (Zur Kenntniss der übertragbaren [illegible]e.) H. Hirshfeld and M. Jacoby.

[illegible]esis. F. L. Kohlrausch and C. Mayer.

[illegible]Size of Blood Corpuscles. (Bestimmung des [illegible]volumens.) M. Bönniger.

[illegible] **[illegible]ment of Rhinoscleroma.**—Rydygier has [illegible] with rhinoscleroma by applying the [illegible] or to the external skin, and states [illegible] to effect a complete cure. Most of his [illegible] and all were from the poorer classes. In one of the typical cases described, the scleromatous masses obstructed and deformed the nose and extended into the palate. The nose and [illegible] upper lip and the palate through the open mouth were expos[illegible]ed to the rays for two minutes daily. This was kept up for 1[illegible] days and resumed after 16 days for 12 days, followed by ano[illegible] days and resumed after 16 days for exposures for 18 and th[illegible] ther interval of 16 days, resuming the vals of suspension. The rh[illegible] for 16 days with the same intervals of suspension. The r[illegible]ino-cleroma gradually subsided and disappeared and the nasal [illegible] passages became normally permeable, with no recurrence du[illegible]ing the five years since. He used a medium soft tube, with a cu[illegible]rent of 32 volts and 2 or 3 amperes. When the rays were fi[illegible]tered through tin foil, the exposures were made for four minutes instead of two.

50. **Sigmoidoscopy.**—Strauss gives an [illegible] illustrated description of a manikin for teaching the technic o[illegible] direct visual inspection of the sigmoid flexure and of the sig[illegible] sigmoidoscope [illegible]fers, and also illustrates a case of primary [illegible] double carcinoma in the sigmoid flexure. The malignant nature of [illegible]tion was determined by direct visual inspection and the stretch of bowel involved was resected in time to save the patient. The case further emphasizes the importance of inspecting the sigmoid flexure even when lesions are found in the rectum presumably sufficient to explain the symptoms observed. In this case, palpation gave negative findings, while a hemorrhagic proctitis served to explain the bleeding. The introduction of the sigmoidoscope was painful and difficult and was given up after two attempts, especially as the opening seemed to be normal and the patient, a man of 65, had arteriosclerosis and required careful measures. The stool was normal except for traces of mucus and blood. Under local treatment of the proctitis, conditions improved, so that the man was free from symptoms for two months, but then more blood appeared in the stool and the sigmoidoscope cleared up the diagnosis at once, a scrap removed showing the malignant nature of the lesion discovered. The patient was in the best of health at time case was reported, six weeks after the excision of the tract involved. The difficulty experienced in introducing the sigmoidoscope in some cases shows the necessity for practice, and for this Strauss has devised a very practical manikin. He advises using a sigmoidoscope in which the lamp is outside, the light being reflected into the tube, thus avoiding soiling or injury of the lamp from matters passing through the tube.

Deutsche medizinische Wochenschrift, Berlin

January 21, XXXV, No. 3, pp. 89-136

57 *Fat Infiltration and Degeneration in the Kidneys. (Verfettung der Nieren.) G. Klemperer.

58 *Infusoria in Stomach Affections. (Infusorien bei gut- und bösartigen Magenleiden nebst Bemerkungen über die sogenannte Infusorienenteritis.) P. Cohnheim.

59 *Xanthomatosis with Chronic Jaundice. (Symptomatische Xanthome bei chronischem Ikterus.) O. Posner.

60 Disturbances in Orientation. (Orientierungsstörungen.) R. Wahle.

61 *Surgical Treatment of Idiopathic Renal Hemorrhage. (Sogenannte essentielle Nierenblutungen.) Treplin.

62 Nature and Importance of Pathologic Electrophysiology. H. Boruttau.

63 I[illegible] Lecithin Bacterial Extracts. (Bakteri[illegible] R. Bassenge.

64 *A[illegible] Large Intestine. (Zur Pathologie und Therapie der falschen (erworbenen) Divertikel des Dickdarms.) F. Franke.

57. **Fat in the Urine.**—Klemperer has been studying fat degeneration of the kidneys and was able to demonstrate in the case of a young suicide that fat is liable to infiltrate into the kidney tissue even when the latter is healthy. The discovery of fat particles in the kidney urine is not necessarily, therefore, a sign of grave prognosis. When they occur in large amounts, however, it is a sign of a necrotic process in the kidney cells. During the necrotic process the lipoid substances undergo some transformation which renders them visible; to this he applies the term fat "phanerosis."

58. **Infusoria in Stomach Affections.**—Cohnheim, continuing his researches in this line, has found that the presence of flagellates in the stomach is a presumptive sign of achylia from some malignant process, although in exceptional cases they may be found with achylia from some benign affection. When found in the stool they indicate some primary stomach

affection. He does not believe that the infusoria have pathologic properties. He gives the details of six cases of cancer of the stomach or esophagus in which the infusoria were found, as also in a case diagnosed latent cancer, but this was disproved by the latter course of the case. The infusoria were not an early sign in any instance.

59. **Xanthomas in Chronic Jaundice.**—Posner's patient was a woman of 37 with cirrhosis of the liver and jaundice but no ascites. Generalized xanthomatosis developed, accompanied by intense pruritus during exacerbations. None of the xanthomas showed any tendency to retrogress; they developed symmetrically and predominantly on parts exposed to friction. Carlsbad and other mineral waters gave no relief, and treatment had to be merely symptomatic.

61. **Surgical Treatment of Idiopathic Hemorrhage from the Kidney.**—Treplin's patient had mild nephritis in the course [illegible]eomyelitis, and serious hemorrhage occurred in the affected kidney. The patient was a boy of 16, and on the days when the urine contained most blood he complained of pain in the kidney region and the organ could be felt much enlarged. Treplin exposed and decapsulated the swollen and dark red kidney, then sutured the incision, as nothing else pathologic was found. The urine contained blood for two more days, then it cleared and the patient rapidly recovered with no further symptoms from the kidneys. Treplin would not hesitate to decapsulate both kidneys in such a case if there was hemorrhage from both.

64. **Pathology and Therapy of Acquired Diverticula in Large Intestine.**—Franke's article is a complete study of this subject which he thinks is very important. The symptoms caused by these false diverticula are essentially the same as those of appendicitis, the conditions being approximately the same in each. Sometimes the resemblance is so striking that the appendix is supposed to be on the left side in the special case. In some instances the syndrome caused by the false diverticulum has been ascribed to cancer. In one such case seventeen years ago he found the sigmoid flexure, rectum and bladder so involved in the supposed cancer that he sutured the abdomen without attempting to remove the growth. The patient, a man, gradually recuperated and the tumor subsided completely, so that he lived in good health for many years afterward. Franke accepted the case then as the spontaneous cure of a carcinoma in consequence of the laparotomy, but now he is confident that the whole trouble was one of these acquired diverticula, the disturbances from which gradually retrogressed, as he has had opportunity to observe in a number of similar cases since. When the diverticulum is in the small intestine it seldom causes any trouble—only one case of the kind is on record; when near the appendix the syndrome is that of ordinary appendicitis. The sigmoid flexure is the main location for the disturbances from this cause. In Telling's compilation of 105 cases, clinical symptoms had been noted in 63, while in 42 the diverticulum was an autopsy surprise. In 16 cases there was adhesion to the bladder, and there was a fistula in 11. In one case in Franke's experience, a woman about 35 had been ailing and feverish for some time, with a tendency to diarrhea. He diagnosed intestinal tuberculosis and prescribed a mixture of bismuth and calcium carbonate with opium. Fecal matter was passed with the urine for a time, but then the condition began to improve and the patient has been in good health during the fourteen years since. He now explains the case as a diverticulitis with adhesion of the flexure to the bladder and perforation, the fistula gradually healing spontaneously. The development of a cancer at the site of a diverticulum has been reported only three times. He discusses the differential diagnosis, the syndrome varying within wide range, and the tumefaction assuming numerous shapes. It is possible, he adds, that irritation from a foreign body may cause a similar syndrome, as in a case in his own experience, treated by resection of the flexure, but no traces of the assumed cancer nor of a diverticulum were detected, merely a small foreign body. In another case he was able to diagnose the false diverticulum syndrome and operate during the incipient stage of trouble. The patient was a typesetter of 45 who for years had suffered apparently from chronic colitis or sigmoiditis, with infiltration and hyperplasia. The laparotomy failed to disclose any traces of inflammation in the colon or flexure, but nearly 100 diverticula were found scattered throughout the intestines, a large number being in the sigmoid region. He explains the serious syndrome induced as the result of the efforts of the diverticula to empty themselves of fecal substance finding its way into them. As the mouths of the diverticula were small, considerable effort was required to evacuate them, and the spasmodic contractions of their musculature caused irritation in them which spread to the bowel outside. In the reported case diarrhea still persists, which he attributes to the diverticula left in the bowel above. The sigmoid flexure formed a sausage-like tumor, and he resected about 9 inches, with end-to-end suture of the large intestine. The patient has been in good health since. The case demonstrates that these diverticula, even without much inflammation, may yet cause an obstinate affection otherwise inexplicable. The case further shows that constipation or ileus need not necessarily accompany these diverticula, but rather that years of incessant diarrhea may result, and yet that notwithstanding these years of irritation, inflammation need not necessarily follow. It is probable that in his case inflammation would have developed in time with the syndrome usually supposed to be characteristic of this diverticulum formation. Franke regards these diverticula as responsible for many intestinal affections, whose origin and cause have hitherto been unexplained; not only for acute and chronic colitis and sigmoiditis, but tumor formation, suppuration and abscesses, with perforation into the abdominal cavity or into adjacent organs. He advises an exploratory laparotomy in all dubious cases or when internal measures fail.

Deutsche Zeitschrift für Chirurgie, Leipsic

December, XCVII, Nos. 1-2, pp. 1-175

65 *Tuberculosis of the Joints. (Gelenktuberkulose.) K. Vogel.
66 Errors in Clinical Measurement of Degree of Genu Valgum. (Fehlergrösse bei der klinischen Bestimmung des Kniebasiswinkels.) A. Hoffmann.
67 .Action of Ether on the Hemoglobin and Red Corpuscles During General Anesthesia in Man and Rabbits. (Neuere Untersuchungen über die Einwirkung des Aethers auf Hämoglobin und rote Blutkörperchen während der Narkose am Menschen und Kaninchen.) M. Bloch.
68 Grouping of the Motor Tracts in the Lateral Columns of the Pyramids. (Läsion durch Kugel.) H. J. Hällström.

65. **Tuberculous Joint Affections.**—[illegible] was assistant at Bonn to Schede, later to Bier and still more recently to Garré, and devotes 127 pages to a review of his experience with 349 cases of tuberculosis of the shoulder, elbow, wrist, hip, knee and ankle. Most of the patients have been examined again recently. The knee and hip joint seem to be predisposed to a tuberculous affection only during early life; the tissues become too tough later to favor the development of the tubercle bacillus. On the other hand, the small multiple joints retain their youthful conditions through life and are thus liable to tuberculous invasion even into advanced age. In 2 cases the tuberculous affection was ascribed to vaccination; in some traumatism was incriminated, but it was always comparatively slight. A serious trauma seems to summon such quantities of defensive agents to the spot that a tuberculous affection rarely results—a slight trauma, on the other hand, offers favorable conditions for the tubercle bacillus. Tuberculin and cinnamic acid treatment proved disappointing, but excellent results were obtained with constriction hyperemia and Vogel commends this method of treatment as by far the simplest and easiest for the patient and the most effectual in its results, although it requires exceptional judgment and attention on the part of the physician in charge of the case. He never leaves it to another unless exceptionally to some particularly intelligent and conscientious trained nurse. Bier's instructions were minutely followed; the simple rubber band, 2 or 3 inches wide, was applied for an hour morning and evening, sometimes with a layer of gauze beneath. The limb is placed as comfortably as possible, and everything else removed that could bind it in any way. This method of treatment applied to the knee gives as good results as iodoform injection, while the functional results are far better. In every

case of elbow. ankle and wrist tuberculosis the cure was complete under this treatment, with no ankylosis. An abscess is not regarded as a serious complication. The age of the patient is immaterial, Bier and his followers obtaining just as good results in patients over 30 as in those under 20. Another point is that they are not discouraged into abandoning this method of treatment too soon or when there is a transient aggravation of the condition. Each case requires individual study and adaptation of the method, and Vogel confesses that he has not obtained quite such good results since he has ceased to be an assistant and has been treating patients independently. In one of the cases related, a woman of 26 had a severe tuberculous affection of the wrist which was lax, crepitating, much swollen and with several suppurating fistulas; the fingers were rigid. The patient remained a year in the hospital, and under the constriction hyperemia the process gradually retrogressed after elimination of several sequesters; the fingers became flexible and there is nothing left now but one small fistula with slight exudation. If a patient has to leave the hospital before the cure is complete, he has the mother or some member of the family trained to continue the constriction, supervising them until convinced of their skill. The patient should return to the hospital occasionally for examination. especially when any change is to be made in the treatment. Some of his patients sent their family physician to learn the special points.

Fortschritte der Medizin, Leipsic

November 20, XXVI, No. 32, pp. 1025-1056

69 Alcohol and Epilepsy. H. Vogt. (Commenced in No. 31.)

December 30, No. 36, pp. 1153-1192

70 Dirt in Milk and How to Keep it Out. (Ueber Milchschmutz und seine Bekämpfung.) Seiffert. (Commenced in No. 34.)

January 10, XXVII, No. 1, pp. 1-48

71 *Treatment of Tardy Contracture in Hemiplegia. (Behandlung der Spätkontrakturen der Hemiplegiker.) von Criegern.

72 *Stenosis of the Pylorus in Infants. (Ueber die sog. Pylorusstenose der Säuglinge.) I. Steinhardt.

71. **Treatment of Tardy Contracture in Hemiplegia.**—Criegern describes a simple method of treating the contractures which develop from two to four weeks or later after the onset of the hemiplegia. He analyzes the phenomena which occur when a person unaccustomed to rowing rows for a time; there is a sensation of fatigue and stiffness in the muscles and the arms are seen to be congested. This fatigue stiffness passes away if the person keeps on rowing or raises his arms above his head. It is not the fatigue of real exhaustion, but is the result of an oversupply of blood in the parts. This physiologic phenomenon is the basis of his treatment for contracture in hemiplegia. The aim is to expel the blood from the arm and then exercise the muscles. The contracture subsides more or less completely after an Esmarch bandage is applied to the upper arm. and the muscles can then be exercised. The bandage is removed with the arm raised; sometimes it is best to defer the exercises until after the bandage has been removed. Afterward the arm is worn in a sling or kept supported high or frequently lifted, striving to ward off local congestion. It is frequently found that the paralysis is not so severe as supposed before the contracture was cured, so that the patient recovers the use of the arm. He relates one typical case out of his experience: A mason of 54 had recovered *to some* extent from hemiplegia nearly two years before, but his right arm was worse than useless, the contracture forcing the nails into the palm so that *abscesses formed.* The man had been constantly under medical care and was able to walk with a cane. Under three months of the induced anemia and exercise treatment the contracture was so far cured that he can use his hand in dressing and eating, the improvement persisting to date and even progressing. Unfortunately. von Criegern adds. the method can not be applied so well to the leg, as it is difficult to keep it raised to expel the blood, but the attempt should be made and much can be accomplished by wearing a light elastic stocking. The principle of the treatment is exactly the reverse of hyperemic treatment; in its modest sphere it has proved remarkably useful in his hands. although of course it has no influence on the underlying cerebral lesions.

72. **Cure of So-called Stenosis of the Pylorus in Infants.**—A complete cure was obtained in the case described with lavage of the stomach, hot cataplasms and opium, three drops a day for weeks; water was supplied by rectal injection or saline infusion.

Jahrbuch für Kinderheilkunde, Berlin

January, LXIX, No. 1, pp. 1-128

73 *Conditional Reflexes in Children. (Bedingungsreflexe im Kindesalter.) N. Krasnogorski.

74 Albumin Content and Lymphocytosis of Cerebrospinal Fluid in Infants with Inherited Syphilis. (Eiweissgehalt und Lymphozytose des Liquor cerebrospinalis bei Säuglingen mit Lues congenita.) L. Baron.

75 Acute and Chronic Bronchiectasis in Children. W. Tschernow.

73. **The Conditional Reflexes in Children.**—Krasnogorski's article reviews what has been accomplished in Russia of late years in the study of the "conditional reflexes," especially at Pawlow's clinic. He has been studying them on children and describes the means by which he was able to record on the Marey drum the movements of the child's mouth and the swallowing movements—all expressions of reflex action in response to stimuli. such as the taste of honey, sound of a bell, tickling, etc. The mechanism of the conditional reflexes in children seems to be the same as in dogs, but the latter are more exact in their response to tones. It is impossible to induce the conditional reflexes during sleep, but study of them opens new horizons, he thinks, for research on the complex nervous phenomena in children, in their simplest form and by objective physiologic means.

Medizinische Klinik, Berlin

January 17, V, No. 3, pp. 79-116

76 *Atropin in Treatment of Bronchial Asthma. P. v. Terray.

77 Urticarial Affections. Wolters.

78 Foundation for the Biologic Mercurial Treatment of Syphilis. (Grundlagen der biologischen Quecksilbertherapie der Syphilis.) J. Citron.

79 Frontal Sinusitis. (Entzündung der Stirnhöle.) C. Ziem.

80 Medical Utilization of Ions. (Die Ionenlehre.) W. Böttger. (Commenced in No. 2.)

76. **Atropin in Asthma.**—Terray protests against the general neglect of atropin in treatment of bronchial asthma. As the affection is a neurosis, atropin is theoretically indicated. and he has witnessed excellent results from it in certain cases, although it is by no means a panacea in all cases. In one case he has succeeded not only in arresting the attacks with it, but the patient was improved so that there was no recurrence of the asthma for ten months, although the man had been constantly affected with it for twenty years. Atropin can be advantageously used as a substitute for or to alternate with morphin. He describes the cases of seven patients with severe asthma treated with atropin, the results quite encouraging. He prescribes the atropin in pills containing each 0.0005 gm. (1/120 grain) at first one a day, then after two or three days gradually increasing to a total of from four to six pills a day, and then gradually reducing the dosage to one pill a day. The atropin not only arrests an attack, but it seems to prevent recurrence. He never saw any ill effects from this dosage.

Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

January, XXIX, No. 1, pp. 1-140

81 *Treatment of Placenta Prævia. B. Krönig. Id. H. Sellheim.

82 *Zinc Intoxication from Intrauterine Cauterization with Zinc Chlorid. (Ueber resorptive Zinkintoxication nach intra uteriner Chlorzinkätzung.) P. Buttersack.

83 The Toxicoses of Pregnancy. (Schwangerschaftstoxikosen.) O. O. Fellner.

84 Lack of Amniotic Fluid and Clubfoot. (Oligohydramnion mit Pes varus congenitus.) M. Mekerttschiantz.

85 Beriberi during Pregnancy and the Puerperium. (Klinische Beobachtungen über die mit der Schwangerschaft und dem Wochenbette kombinierte Kakke.) J. Ogata.

81. **Treatment of Placenta Prævia.**—Krönig's article is an open letter to Professor Martin prophesying that the latter will soon become converted to the necessity for more active measures in treatment of placenta prævia, especially for wider application of Cesarean section. Sellheim says the same, confident that the skill of the general practitioner can be trusted more and that it is a mistake to assume that he will infect

the patient if he makes an examination and tampons. Sellheim adds that he has recently operated on eleven women for placenta prævia who had mostly been examined or tamponed before they reached the clinic. and yet there had been no infection. His confidence in the general practitioners had not been misplaced. although. to be sure, his incision in the uterus had been extraperitoneal.

82. **Zinc Intoxication from Cauterization of Uterus.**—Buttersack reports the case of a young ii-para with chronic endometritis and recurring hemorrhages; a spontaneous abortion at the seventh week was followed by persisting hemorrhage which yielded to curettement. The physician in charge of the case advocated cauterization of the uterine mucosa to put an end to the hemorrhagic tendency, and in the course of five days he swabbed out the uterus three times with a 10. 15 and 30 per cent. alcoholic solution of zinc chlorid. Abdominal symptoms then developed, vomiting, nausea, pains in lower abdomen and stomach, insomnia, twitchings and symptoms of nephritis; after various remissions of the symptoms the patient succumbed sixty-three days after the cauterization. The kidneys showed signs of toxic nephritis and zinc was found in the urine, eschars and intestines. The nephritis showed an acute onset, then an apparently mild course interrupted by four acute exacerbations evidently due to reintoxication, as no external cause was evident. The first acute phase gradually became transformed into the chronic parenchymatous form with rising blood pressure and uremia. Then followed symptoms of secondary contracted kidney. There was difficulty in urinating. amounting once to complete retention, but there was no fever at any time. No therapeutic measures proved of any avail; it was impossible to reach the source of the constant reintoxication, as the zinc had evidently been conveyed through the lymph. There was no sign of inflammation in the peritoneum. It is possible that nephritis may have developed in other cases after zinc chlorid cauterization, the true source of the poisoning being unsuspected.

Münchener medizinische Wochenschrift

January 19, LVI, No. 3, pp. 113-160

86 *Constitutional Eczema in Infants. (Zur Klinik und Therapie des konstitutionellen Säuglingsekzems.) E. Feer.
87 *Treatment of Placenta Prævia and of Eclampsia. K. Baisch.
88 *The Ocular Tuberculin Reaction for Prognosis in Tuberculous Affections in Pregnancy. E. Martin.
89 *Predisposition of the Apices to Tuberculosis. (Die Disposition der Lungenspitzen zur tuberkulösen Phthise und das Lokalisationsgesetz des ersten tuberkulösen Lungenherdes.) C. Hart.
90 Determination of Hemoglobin and its Derivatives by Hemochromogen Crystals and the Lines in the Violet or Ultraviolet Part of the Spectrum. K. Bürker.
91 Experimental Research on Production of Atypical Proliferation of Epithelium. (Erzeugung atypischer Epithelwucherungen.) H. Stoeber.
92 Bordet's Pertussis Bacillus. (Keuchhustenbazillus.) G. Seiffert.
93 Suture of Lung to [illegible] 'Zwei Fälle von Lungennaht wegen [illegible] ›tsch.
94 *Camphor in Aliment[illegible] ›ts. (Anwendung von Kampher bei [illegible] des Säuglings.) A. Würtz.

86. **Constitutional Eczema in Infants.**—Feer distinguishes between "milk crust" and diffuse dry eczema. The former yields readily as a rule to regulation of the diet, restricting the proportion of milk to the minimum or suspending it altogether, giving instead flour gruel, strictly avoiding eggs and meat broths. A teaspoonful of uncooked fruit juice can be given occasionally to children four months old. As the child grows it requires a fruit and vegetable diet, the fruits and vegetables being strained through a sieve; no meat is given. The same measures also prove effectual in lichen scrofulosus, but the diffuse form of eczema without effusion is more rebellious. He does not advise local measures for the "milk crust," having observed after them febrile phenomena and even convulsions. He has even witnessed fatal heart failure and death in dyspnea with high fever and symptoms of intoxication. He has collected from the literature 30 such cases of sudden "eczema death," the underlying status lymphaticus predisposing both to infections and to sudden fatalities. In children with this constitutional anomaly, merely the rapid removal of crusts, the application of an irritating salve, a hot pack, subsidence of the eczema, etc., may entail a sudden fatality. He has had no experience with metastasis of the eczema, but has frequently noticed the subsidence of the eczema on the outbreak of asthmatic bronchitis, the two alternating. Local treatment of the eczema differs from that of adults only in the necessity for greater gentleness and caution.

87. **Treatment of Placenta Prævia and Eclampsia.**—Baisch regards the new operative era in treatment of these conditions as denoting marked progress. Instead of the old statistics of from 10 to 20 per cent. maternal mortality and from 70 to 80 per cent. fetal mortality, he states that with vaginal Cesarean section all the mothers were saved in a series of forty cases, and all but three of the twenty-two children were alive at birth. His communication issues from Döderlein's clinic at Munich.

88. **The Ocular Tuberculin Reaction for Prognosis.**—Martin applied the ocular tuberculin test to twenty-seven pregnant women with known tuberculosis. His aim was to determine whether the system could count on defensive processes or whether they were too weak to be of any avail. A positive reaction to the test he regarded as a good omen, accepting it as a sign that the defensive apparatus was actively functioning. A negative reaction, on the other hand, in the presence of clinically unmistakable tuberculosis, is an indication of exhaustion of the defenses, a sign that the pregnancy should be interrupted at once; freed from the stress of pregnancy the system may rally and conquer the tuberculous process, while otherwise it is doomed to succumb. Treatment on these principles has proved very satisfactory in his experience, and he urges the ocular test as a reliable means of determining the prognosis in such cases.

89. Summarized in THE JOURNAL, Oct. 10, 1908. page 1252.

94. **Camphor in Alimentary Intoxication in Infants.**—Würtz combats the collapse in infants with severe gastrointestinal derangement by injecting every three hours from 0.5 to 1 c.c. of a 10 per cent. camphorated oil. The injections are kept up until it is possible to supply food to restore strength to the heart. In one case he gave 59 injections in the course of ten days, saving the apparently moribund child. Saline infusion is liable to overburden the heart already sinking under its task, and thus to promote the fatal ending. In some instances he has known that saline infusion was the direct cause of the immediate heart failure, while camphor stimulates the respiration center, heart and vessel innervation, and raises the blood pressure.

Wiener klinische Wochenschrift

January 21, XXII, No. 3, pp. 79-114

95 Experimental Hypertrophy of the Heart. (Experimentelle Herzhypertrophie.) E. Miesovicz.
96 The Opsonins During the Puerperal Process. J. Schiffmann and R. Cohn.
97 *Diagnosis of Malarial Splenomegaly. S. Kirkovic.
98 Study of Esbach Test for Albumin. (Zur Esbachschen quantitativen Elweissbestimmung und über eine neue Kreatininverbindung.) E. Mayerhofer.
99 *Treatment of Tuberculous Children with Marmorek's Antituberculosis Serum Administered by the Rectum. F. Ganghofner.

97. **Diagnosis of Malarial Splenomegaly.**—Kirkovic presents arguments to prove that the affection known as Banti's disease has really been unrecognized malaria in a large proportion of cases, or, at least, what he calls a paramalarial condition. Malaria does not always induce a characteristic febrile syndrome, or the fever may have not been noticed by the patient. He tabulates the findings in a number of cases, calling attention to the small number of leucocytes and the preponderance of mononuclears in actual malaria, and the small number of leucocytes with lymphocytosis which is characteristic of the paramalarial condition. The latter findings with the history of the case and former residence in a malarial region confirm the diagnosis. The blood findings in this case suggest that the blood-producing apparatus is somewhat impaired, while the lymph-producing apparatus is still in good order.

99. **Marmorek's Antituberculosis Serum Administered by the Rectum.**—Ganghofner reports administration of this serum by

the rectum to thirty-two children at Prague. The results were disappointing, he says.

Zeitschrift für Geburtshülfe und Gynäkologie, Stuttgart

LXIII, No. 3, pp. 407-658. Last indexed Feb. 13, 1909

100 *Cesarean Section. Retrospect and Prospects. (Kaiserschnitt.) O. Küstner.
101 *Trials of Disinfection with Mixture of Acetone and Alcohol, According to von Herff. R. Oeri.
102 *Value of Pure Alcohol Disinfection. (Wertigkeit der reinen Alkoholdesinfektionsmethode.) R. Pfisterer.
103 Relations of Head Tumor to Life of the Fetus. (Beziehung der Kopfgeschwulst zum Leben der Frucht.) K. Holzapfel.
104 Study of Corpus Luteum and Interstitial Tissue of Ovary During Pregnancy. (Corpus luteum und interstitielle Eierstocksdrüse während der Schwangerschaft.) J. Wallart.
105 Are Chorioangiomas True Tumors? (Sind die Chorioangiome echte Geschwülste? E. Gräfenberg.
106 *Experiences with Schauta's Method of Vaginoperoneal Plastic Operations. (Zur Interpositio uteri vesico-vaginalis.) T. Petri.
107 *Treatment of Hematocele After Extrauterine Pregnancy. (Behandlung der Hämatocele nach ektopischer Schwangerschaft.) O. Herbert.
108 Deventer's Visit to Copenhagen, 1689. E. Ingerslev.
109 Cyclic Transformation of Uterine Mucosa. (Cyklische Umwandlung der Uterusschleimhaut.) Y. Iwase.
110 Intraligamentary Ovarian Pregnancy. (Intraligamentär entwickelte Ovarialgravidität. mit Hämatombildung im Ligamentum latum.) J. Voigt.
111 *Care of the Umbilicus Omitting the Daily Bath. (Nabelabfall und Nabelheilung bei Fortlassung des täglichen Bades an der Hand 12jähriger klinischer Erfahrung.) E. Eicke.

100. Cesarean Section: Retrospect and Prospects.—Küstner reviews the various works that have issued from his clinic bearing in any way on this subject. During the last fifteen years he has had occasion to do or supervise Cesarean section in one hundred and four cases, including six in which the operation was done during or after death. This material is analyzed from various standpoints and the new phase into which Cesarean section has recently entered is discussed.

101 and 102. Acetone-Alcohol Disinfection of the Hands.—Oeri writes from von Herff's clinic to expatiate on the superior results obtained when the hands are disinfected with the Herff acetone-alcohol technic. The acetone dissolves fat and penetrates deep into the tissues and into the capsules of bacteria, while in combination with the alcohol it tans the surface and puckers up the crevices in the skin. It guarantees a freedom from germs that approximates asepsis, especially in the nail region, while the technic requires much less time than any other, the injury to the skin is less than with other technics, and the disinfecting effect lasts longer. The tabulated findings of numerous tests of the technic as applied in the clinic sustain his assertions. Acetone is comparatively inexpensive, mixes readily with water and alcohol while it hardens the tissues and is less inflammable than ether and benzine. The concentration recommended is a 50 per cent. alcoholic solution of acetone. The hands are washed quickly but not scrubbed, and then the acetone mixture is applied and rubbed in with flannel rags for four or five minutes. The hands feel smooth and dry. In 127 operations moist stitch holes were observed in only 2 per cent. Pfisterer reports similar tests of disinfection with alcohol alone, his conclusions being that alcohol alone is suitable only for very brief operations; the nail region must be carefully attended to beforehand. He adds that it is an actual science to disinfect the hands properly, and that it has to be learned carefully and applied each time with the most scrupulous care and the closest attention.

106. Utilization of Uterus for Plastic Operation on Vagina and Perineum.—Petri has followed Schauta's technic in 14 cases, utilizing the uterus to make a new floor for the pelvis, covering it entirely with vaginal tissue. Two of the patients succumbed to intercurrent disease and in one case the uterus tore out of its new location, but the results were extremely satisfactory in the other cases, and he advocates this technic as offering many advantages for such operations on elderly women, except that it might be difficult to remove the uterus in case of cancer later. The details of the technic and of his cases are given in full.

107. Treatment of Hematocele After Extrauterine Pregnancy.—Herbert reports eight cases which demonstrate the importance of immediate operation in all cases of extrauterine pregnancy, never leaving to chance the disposal of the hematocele. Even after it has become encapsulated, fatal complications may ensue, repeated hemorrhages or infection, even weeks after the first hemorrhage. In one of the cases reported adhesions developed between the hematocele and the other sound tube, interfering with conception later. This case emphasizes particularly the necessity for prompt surgical intervention to prevent sterility later.

111. Care of the Umbilicus.—Eicke comments on the large proportion of fatalities among infants for which the umbilicus is responsible, and urges the necessity for treating it with as much care and protecting it against infection as scrupulously as any other wound. He is assistant at Küstner's clinic at Breslau where it is the practice to leave only a short stump to the cord and dress it merely with sterile cotton left for five days unless symptoms of infection develop, in which case alcohol gauze dressings, renewed daily, are applied. There have been 56 cases of febrile infection during the last 7,300 infants, that is, about 0.76 per cent. After the first cleansing bath, the infants are not bathed again until the cord drops off, except in asphyxia or pneumonia. The stump generally drops off by the sixth or seventh day. The umbilical wound is like an aseptic operative wound, and no one would ever think of exposing the latter to a daily bath, compelling frequent changing of the dressings. There is even less reason for the daily bath for infants during the first week after birth, especially in view of the conditions that generally prevail for bathing the baby and the opportunities for maltreatment of the healing umbilical wound, beside the damage from allowing it to get wet.

Riforma Medica, Naples

January 11, XXV, No. 2, pp. 29-56

112 Tumors of the Base of the Brain. (Tumori della base dell' encefalo.) G. Rummo.
113 Experimental Leucopenia. G. Lucibelli.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. *A selection will be made for review in the* interests of our readers and as space permits.

Gynecologic Diagnosis. By George Winter, O. O. Professor and Director of the Kgl. Universitäts-Frauenklinik in Königsberg, Prussia, with the Collaboration of Dr. Carl Ruge, of Berlin. Edited by John G. Clark, M.D., Professor of Gynecology, University of Pennsylvania. After Third Revised German Edition. Cloth. Pp. 670, with illustrations. Price, $6.00. Philadelphia: J. B. Lippincott & Co.

Experimental Researches on Specific Therapeutics. By Paul Ehrlich, M.D., D.Sc., Director of the königlisches Institut für experimentelle Therapie, Frankfort. The Harben Lectures for 1907 of the Royal Institute of Public Health. Cloth. Pp. 95. Price, $1.00. New York: Paul B. Hoeber, 1909.

An Analytical Index of Volumes I to X of the Medical Review and a Digest of the Facts Important to the Practitioner in the Medical Periodicals of the World, 1898-1907. Cloth. Pp. 201. Price, 7 shillings 6 pence. London: The Medical Review.

The Methods and Scope of Genetics. An Inaugural Lecture delivered October 23, 1908, by W. Bateson, M.A., F.R.S., Professor of Biology in the University of Cambridge. Cloth. Pp. 49. Price, 50 cents. Cambridge: The University Press, 1908.

Report of Provisional Administration from Dec. 1, 1907, to Dec. 1, 1908, Republic of Cuba. By Charles E. Magoon, Provisional Governor. Paper. Pp. 515, with illustrations. *Havana:* Rambla & Bouza, 1909.

Twenty-fourth Annual Report of the Adirondack Cottage Sanitarium, Saranac Lake, N. Y., November, 1908. With Medical Supplement. By Lawrason Brown. Paper.

National Association for the Study and Prevention of Tuberculosis. Transactions of the Fourth Annual Meeting, Chicago, June, 1908. Paper. Pp. 352.

The Changing Values of English Speech. By Ralcy Husted Bell. Cloth. Gilt Top. Pp. 302. Price, $1.25. New York: Hinds, Noble & Eldredge.

Missouri State Sanatorium for the Treatment of Incipient Pulmonary Tuberculosis. Mount Vernon, Mo., November, 1908. Paper.

Tono-Bungay. By H. G. Wells. Cloth. Pp. 460. Price, $1.50. New York: Duffield & Co., 1909.

Report of the Albany Hospital and Training School for Nurses, 1908. Paper. Pp. 65.

Transactions of the North Dakota State Medical Association, 1908. Paper. Pp. 191.

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Address

DIAGNOSIS IN ITS RELATION TO THE LABORATORY AND THE BEDSIDE *

W. W. GRANT, M.D.

DENVER

In describing a visit to this country, Dr. Rolleston[1] expresses himself interestingly as to medical teaching and hospitals here. He says that more systematic work is done in the clinical laboratories, but that there is a serious lack of routine ward work in the hospitals. The danger is suggested that the thoroughness in the clinical laboratory examinations may lead to less thoroughness in the routine physical examination of patients. (Specialism is more extreme, he states, than abroad.) I believe that this criticism is fair and just. The not infrequent diagnostic errors of internists and surgeons, even those who have had good educational and clinical advantages, show a lack of thoroughness in examinations and of close observation of clinical phenomena, or at least failure to deduce rational conclusions.

The schools, and the bearing of many leading men in special work, in emphasizing, to an inordinate degree, the importance of pathology and technic, in comparison with other features of the work, are partly responsible for the absence of painstaking observation and scientific analysis of symptoms at the bedside.

Detailed critical study of the history of cases and the meaning of clinical signs, subjective and objective, is, I fear, not the common practice—even of surgeons.

There is too much reliance, even when not necessarily exclusive, on instruments of scientific precision and on laboratory diagnoses, and too little on the training and discipline of one's own faculties in one's accustomed work. The result is a few expert diagnosticians in certain departments, and a general decadence in diagnostic skill and acumen.

In proportion to the better facilities for teaching and improved educational advantages generally, we should expect equal progress in the ability to observe and understand the causes and the conditions of disease, and we ought to have more, and not fewer, diagnosticians. Even in large communities, it seems to be accepted as a satisfactory condition if there are one or two men only who deserve this distinction.

It requires closer study, more time to analyze and elucidate—in order to interpret symptoms and conditions more rationally—than most men seem willing to give to the subject. It seems strange that competent men should commit errors in diagnosis that could be avoided if well-known resources were employed in the solution of problems common to our experience. The surgeon has deified aseptic and operative technic—the former the common knowledge of the profession, the latter the individual, and, in considerable degree, varying attribute of each operator. Excellent in these respects, and often in pathologic lore, the surgeon trusts the rest to the laboratory, seeming to overlook or underestimate the fact that the thorough, competent surgeon is not only a skilful operator and an intelligent pathologist, but an observer and respecter of many other important and necessary facts in the equipment of an equally skilful diagnostician.

Sound judgment in the many phases of our work is the growth of natural fitness, education, close observation and the knowledge of laws and facts governing specific and general diseases. A great surgeon is not a mere mechanic; he is a good physician and a trained clinician as well. It must be admitted that errors of diagnosis are often due to careless and indifferent examinations, to insufficient time and want of due consideration of all the evidence that might be obtained, and too much reliance on the probability or certainty of the laboratory expert, if one is convenient and available.

An exploratory operation is often a short, and sometimes unnecessary, cut to the solution of the difficulty. Being generally a safe procedure, under favored conditions, it is a ready and quick resort whether an emergency exists or not.

May I cite a few recent suggestive cases of diagnostic interest? A man of 67, of previous excellent health, except a brief but significant history of evidence of gallstones ten years before, had suffered for eight or ten months from slight indigestion and intermittent diarrhea. He was examined by two first-class physicians and three or four surgeons of equal distinction. A tumor of the epigastrium of considerable dimensions was noted, and a globular swelling, the size of a cocoanut, to the right of the umbilicus, and below the edge of the liver, was also recognized. The patient never vomited, though eating solid food, and at no time was there evidence of pyloric stenosis. A test meal was given and absence of hydrochloric acid was shown. The diagnosis was cancer of the pylorus. With such a history, should it have been necessary for a postmortem six months later to determine the presence of cancer of the gall bladder with gallstones, secondary involvement of the liver, and no disease of the stomach?

Again, a woman of 65 had uterine hemorrhage, an acrid, offensive discharge, and other clinical evidences of cancer. A surgeon advised hysterectomy. A consultation was held, curettage was performed and the scrapings sent to a distant pathologist to determine the existence or non-existence of cancer. Was this, for obvious reasons, a wise surgical procedure?

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* Presidential address read before the Western Surgical and Gynecological Association, Minneapolis, Dec. 29, 1908.

[1] Brit. Med. Jour., Dec. 28, 1907.

A young woman of 20 fell from the steps of a street car in motion, striking on her abdomen; was laid up for several weeks, and a swelling to the left of the umbilicus gradually developed. It was explored and a large quantity of pus evacuated. A fistula remained, from which there was discharge, including urine, for a year. Physicians and surgeons were in doubt as to the source of the trouble. Should an *x*-ray examination, revealing renal calculi, have been necessary to determine the source and nature of the abscess (pyonephrosis)?

Would an experienced surgeon wait for the demonstration of 20,000 white corpuscles to the cubic millimeter before recognizing a case of postoperative ileus? Would he rest on the opsonic index to determine, as a rule, his course of action in operative work?

A woman of 38, married, never pregnant, was examined, three or four years ago, by a surgeon of good character. The symptoms were persistent pain in back over left ileum posteriorly; the diagnosis, tuberculosis of the left hip joint. The patient was treated with extension in bed for six months with marked aggravation of pain and nervousness. The pain extended to the thigh, knee and ankle. Extension was discontinued and the patient went on crutches for a year. A critical examination of the patient at a more recent date by a surgeon and neurologist reveals absolutely no indication or evidence of tuberculosis, past or present, of any part or organ and no family history of same. The joint is perfect. Hemoglobin, 75 per cent. There is a distinct neurotic personal and family history. The patient is anemic and hysterical. The surgical treatment was unnecessary and undoubtedly made worse the neurasthenia from which she has been suffering.

Such patients are not infrequently overtreated, even by the surgeon sometimes.

A young woman of 26 had had acute pleurisy in the left side when 8 years old. At 15, pus from empyema ruptured through the bronchial tubes. For the last eight years the patient had suffered from paralysis of the left leg; she was bedridden for two years, and also had disease of the lower dosal vertebra with ulceration through the back. Three years ago she was examined by a surgeon of high character, who pronounced the disability of the leg tuberculous periostitis of the femur. Thoracotomy was performed one year ago. The patient was recently examined by a neurologist and the same surgeon who made the examination three years ago, and a diagnosis was made of motor paralysis of leg due to meningomyelitis from the diseased vertebra with no tuberculosis of the femur.

The syphilographer and the surgeon have not often found it difficult to make a diagnosis of hard chancre; but in the future the demonstration of the *Spirochæta pallida* will, I suppose, be necessary to a sure diagnosis, notwithstanding the declaration of Hoffman, Schaudinn's chief assistant, that only an expert who, by familiarity, has acquired intuitive knowledge of the morphology is competent to differentiate the stained forms from other spirochete bodies. Bloodgood, in a recent review of joint surgery, says: "It seems surprising that for years we have concentrated our attention on the joints, or, as physicians, on some changes in metabolism, and not investigated for the source from which the infections flowed."

These statements and criticisms will apply as justly to the work of the laboratory as to the unscientific clinical work at the bedside. The busy physician and surgeon can not do much of the immense amount of laboratory work now required, even if equipped for it, as few are; but laboratory findings are essential to a high degree of diagnostic efficiency and to the most scientific practice of our art. The knowledge of the internist is necessary to the surgeon. He is far from accomplished without it, and it is of the utmost importance to the patient that the physician should know enough of surgery to differentiate between a medical and a surgical condition. The very exclusive specialism which treats these qualifications lightly seems forgetful of its own needs and the full measure of its obligations.

In those fine differential distinctions, especially in the diagnosis of pancreatitis, cholelithiasis and duodenal and stomach ulcers, there are no laboratory tests by which the diagnosis can be made, nor are there any conclusive clinical tests; but both are helpful and necessary to a just conclusion. The Cammidge test, like the test meal, the Widal and other tests, is merely an aid in the scientific solution of the many problems which confront us in the efforts to discover the cause and nature of disease. The microscope, unless directed by a knowing hand, and balanced by a scientific spirit, could not have given renewed distinction to the Paris school of medicine and to the names of Capitan and Professor Cornil, who made the pathologic examinations, and a diagnosis of interstitial nephritis (which is consistent with the clinical history) in the case of Admiral Paul Jones 113 years after his death.

Far be it from me to underestimate in the slightest degree the absolute necessity and the great value of the laboratory to the progress of medicine. It is the very basis of our greatest achievements, and it is the force which has immortalized, among the many, the names of Pasteur and Koch, and which has honored and glorified the profession wherever the science of medicine is known. But the results obtained by the use of instruments of scientific precision are not always accurate and reliable. So much depends on the motive power and genius behind the instrument that we can be content only with real, and not half-baked, experts, in order that our scientific conclusions may rest on a scientific basis, and our efforts have a practical value. With this knowledge and equipment applied at the bedside, and with that common sense which is fortified by observation and experience, we should be able to secure a satisfactory history, to make a more complete and intelligent examination, and to interpret symptoms and signs with more skill and judgment.

Science is not the exclusive property of the expert, nor the necessary product of the laboratory. Our aim should be, not to produce fewer experts in research work, but more scientific clinical experts and diagnosticians. This I believe necessary to the broader culture and usefulness of the profession, as well as to the best welfare of the sick. Surgery, as a study, is not exclusive, though the practice may be. A narrow view of the subject is not conducive to the best education, nor to the most thorough equipment. Personality is of the greatest moment; but great surgeons are not made by imitation, and skill in diagnosis is a protean product that can never be measured by the rod and the plumb.

Slow Pay.—The press reports of a national tailors' convention state: "The tailors say that a whole lot of people seem to think the only bills they are not duly bound to pay are tailors' bills." Some physicians have stated that doctors' bills were so considered. It may help some to know that there is a difference of opinion.

Original Articles

THE TREATMENT OF ERYSIPELAS BY INOCULATION WITH A SPECIFIC VACCINE[*]

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In January of this year we undertook the study of erysipelas with the special consideration of the production of an artificial immunity by inoculation with a vaccine prepared from the *Streptococcus erysipelatis* of Fehleisen. "True" erysipelas, as you know, is due to an infection of the lymph spaces of the skin by the micro-organism just referred to, with or without involvement of subjacent cellular tissue; and the majority of investigators believe that the streptococcus of erysipelas is the sole or specific cause of the disease. Moreover, many believe that it is identical with the streptococcus causing puerperal septicemia, pyemia, etc. The work of Dean and Petruschky would seem to confirm this view.

From the standpoint of immune therapy it is a matter of some importance to discover whether the disease is one in which the bacteria are localized to the affected part or whether they commonly escape into the blood stream and produce a bacteriemia.

Experiments on animals and also blood cultures taken in severe cases would seem to establish the rarity with which it becomes a general infection. Furthermore, Manfredi and Traversa have succeeded in producing the severe constitutional symptoms of erysipelas in animals by inoculation of the toxins of the specific streptococcus. It would thus seem probable that the general symptoms of malaise, pyrexia, acceleration of the heart-beat, and mental apathy or irritability are all due to the absorption of the specific toxin of the streptococcus, while, on the other hand, the local signs and symptoms are consequent on the local multiplication of the micro-organisms in the lymph spaces of the skin and the local production of toxins; moreover, that a remedial measure which is capable of inhibiting the reproduction of the streptococcus would be likely to control the clinical manifestations of the disease quickly.

Our investigations of the opsonic content of the blood of 16 patients before inoculation was undertaken revealed the interesting and important fact that in 14 of these the streptococco-opsonic index ranged from 0.65 to 0.9; in the remaining 2 cases it was in one 1.1 and in the other 1.3. It is worthy of note that these last 2 patients were proceeding to recovery, presumably owing to the natural production of specific antibacterial substances as the result of autoinoculation, by which term is meant the escape of bacteria or their products into the adjacent lymph or blood streams and the consequent stimulation of the machinery of immunization to the production of antibacterial substances.

Perhaps this consideration will be more intelligible if we mention certain well-known phenomena of such localized infections as boils. In these the opsonic index to the specific micro-organism — that is, the *Staphylococcus pyogenes aureus* — is less than normal — for example, 0.7, 0.8, etc.—normal being taken as 1. The chronicity of furunculosis and the low opsonic indices observed have been shown to be due to the absence of autoinoculation. Similarly in the case of certain localized infections due to the tubercle bacillus the opsonic index is less than 0.8. Tuberculosis of lymphatic glands, the bladder, etc., are characteristic instances of this. It is unnecessary for us to multiply examples of localized infections due to other micro-organisms; suffice it to say that continuance of these infections is associated with a lowered opsonic power while progress to cure is associated with a rise of the opsonic power above normal.

The sixteen cases referred to were studied with respect to their opsonic power to the *Streptococcus erysipelatis*, not only before active treatment by the streptococcus vaccine was undertaken, but also afterward. In the 2 patients proceeding to recovery a high opsonic power was observed before inoculation, so these must be omitted. In 13 cases a subsidence of the signs and symptoms of the erysipelas was definitely associated with a rise in the opsonic power. The remaining patient died; and it is of interest to note this patient particularly, since her case is the only fatal one of our series of 50 cases. The patient was a very fat woman, 61 years old, comatose on admission to the hospital. Her leucocytes were not increased in number and her opsonic index to the streptococcus was 0.6. Just as she responded feebly to such general stimulants as alcohol and strychnin, so also was her response weak to the specific stimulation of our vaccine. It was with difficulty that we increased the opsonic power of her blood to 1.1 by inoculation. She died shortly after admission from the progress of her disease without regaining consciousness. This patient's case is graphically shown in Chart 1.

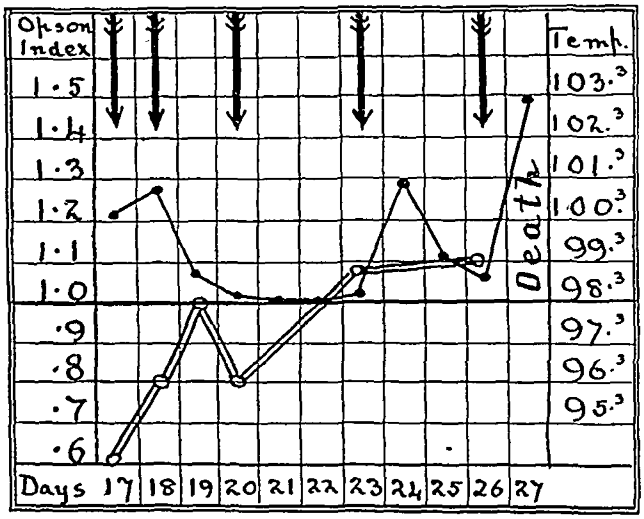

Chart 1.—Almost continued pyrexia with feeble response of opsonic immunity to inoculation with from 10 to 20 million devitalized streptococci. Double line is opsonic tracing; *single line*, temperature tracing; arrows represent inoculation. This chart represents the only fatal case in a series of 50.

STUDY OF PATIENTS TREATED BY INOCULATION

Charts 2 and 3 represent fairly well the opsonic and temperature curves of 13 out of the 16 patients whose blood was fully and frequently investigated. It will be observed that in both the opsonic power was low before treatment and that it rose subsequent to one or two inoculations of the streptococcus vaccine; furthermore, that the fall of the temperature was shortly subsequent to the rise of the opsonic power. We may add that the rise of the opsonic power coincided more particularly with marked diminution of toxemia and definite evidence of localization of the inflammatory area.

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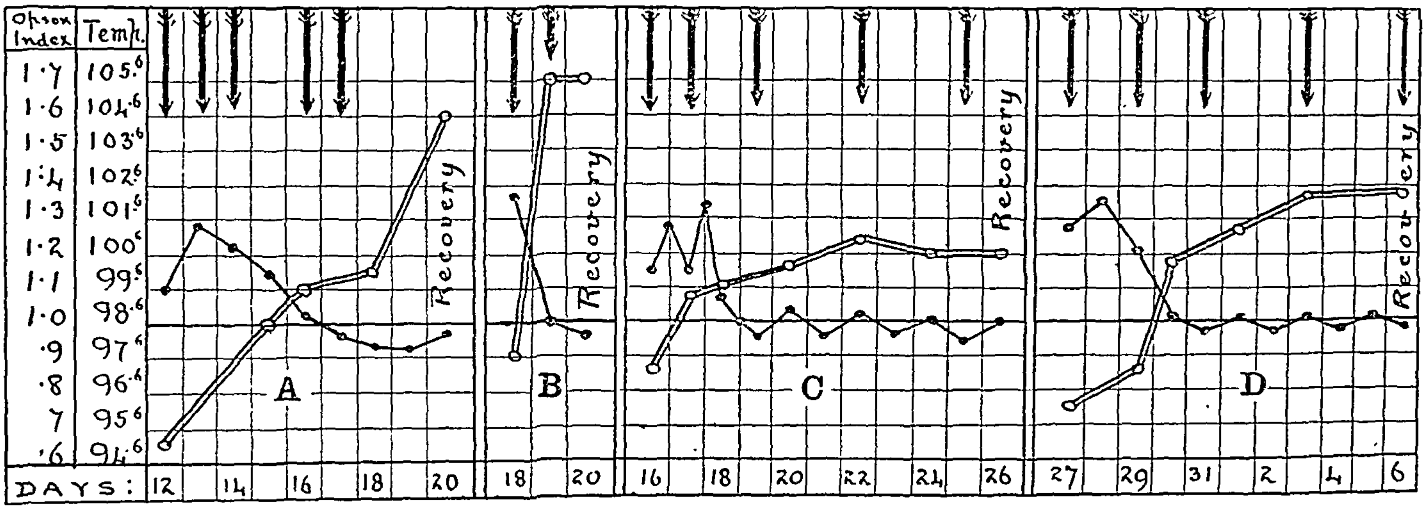
[*] From the Department for Therapeutic Inoculation, the Toronto General Hospital: an address given before the Medical Society of the County of New York, Oct. 26, 1908.

These observations on the course of immunity in erysipelas before and after inoculation with the vaccine appear to us important; but, after all, the final judgment on the value of an alleged specific remedy must rest on the comparison of the clinical results obtained by its use with those due to the administration of other alleged remedies. Erysipelas is so varied in its clinical manifestations that there are serious difficulties to an absolute comparison, but such a comparison is not impossible and we shall proceed with it.

The first stage of the comparison is somewhat illogical, for we shall refer to our clinical observations of the course of the disease in our whole series of 50 cases and only then make certain detailed comparisons of a series of 19 cases treated without vaccination and a similar number treated by our specific vaccine.

Of the 50 cases 18 were very severe, 20 were severe, and 12 were mild cases. The chief criteria of severity were pronounced pyrexia (103 F. or more), tachycardia, mental dulness or delirium, and a considerable inflammatory area, with signs of rapid spread.



Charts 2-5.—Rise of opsonic immunity and fall of temperaturein four patients. A, B, C and D. Double line is opsonic tracing; single line, temperature tracing; arrows represent inoculation withfrom 10 to 20 million devitalized streptococci.

Time will not permit us to detail cases, so we are forced to sum up our observations in a general way. Perhaps the most striking change in our patients was a rapid subsidence of such symptoms of toxemia as mental unrest or even delirium and of that profound malaise so usual in this disease. Even the patients in acutely severe cases almost invariably felt quite different—we might almost say infinitely better—in twenty-four to thirty-six hours after the first inoculation with our vaccine. Locally some spread of the process usually occurred until after the second inoculation, which was administered on the second day, and occasionally until after the third; but whatever the extension observed, it was remarkable in certain respects.

1. The color was of a brownish-red rather than the angry red of the acute process.

2. The swelling of the skin was less.

3. The tenderness over the area of extension was less acute or absent.

4. The patient complained of little pain in it.

5. The margin of the erythema was rarely raised but faded imperceptibly into the adjoining tissues.

For purposes of comparison of our own results of cases treated solely by inoculation with our streptococcic vaccine, we have had recourse to the records of all the cases in the case-books of the Toronto General Hospital for the year 1907. Of these 19 are recorded, most of which were treated by some such external application as ichthyol or lead lotion or internally by ferric perchlorid. I realize the objection to accepting this series as parallel to our own, but probably the comparison is not an unfair one, as perhaps those who have had years of experience of hospital erysipelas will be able to testify. I think it will be agreed that the cases of one year closely resemble in average severity those of another. The salient features of this comparison are set forth in the accompanying table:

TABLE SHOWING THE RESULTS OF TREATMENT OF A SERIES OF 19 CASES OF ERYSIPELAS BY INTERNAL AND EXTERNAL MEDICATION AS COMPARED WITH A SERIES OF 19 CASES TREATED SOLELY BY INOCULATION WITH A SPECIFIC VACCINE

Method of treatment.	Pyrexia completed in 24 hrs.	Pyrexia completed in 48 hrs.	Pyrexia completed after 48 hrs.	Average duration of pyrexia.	Complications.	Average duration of illness.	Average stay in hospital.
Non specific.							
Series 1907, 19 cases..	3	3	13	8.9	6	25.0	18.0
Specific Vaccine.							
Series 1908, 19 cases..	7	7	5	3.1	1	12.8	11.2

In the 1907 series the pyrexia lasted in 13 cases from four to thirty days.

In our own series of 19 only 5 lasted after forty-eight hours; that is, 1 for three days, 1 for four days, 1 for six days, 1 for nine days, and 1 patient died.

The cases of the 1907 series manifested the following complications:

Recurrences, 2 on the fourteenth day.
Synovitis, 1.
Conjunctivitis, 1.
Multiple abscess about face, 1.
Pneumonia and cervical abscess, 1.
In all, 6.

In our own series there are no complications to report, except an abscess over the parotid, which was due to a staphylococcus infection, probably the result of an incision previous to admission to the hospital.

We are unable to make any satisfactory comparison as to the rapidity or extent of the spread of the primary area involved in the two series. The data available on this point are insufficient.

We realize fully that a prolonged trial of the vaccine will be necessary before any final judgment can be reached by the medical profession as to its therapeutic value. Nevertheless our own belief is firm from the study of 50 cases that a vaccine prepared from the

Streptococcus erysipelatis, properly administered, exercises a specific and controlling influence on the course of the disease — preventing its spread, lessening its severity and hastening recovery.

The reason for our faith may be briefly summarized under two main heads:

1. From the standpoint of immunity: The opsonic power of the blood is low during the acute process of the disease and whenever more or less rapid spread is manifest; again, the subsidence of such symptoms as malaise, mental unrest or apathy, pain and tenderness and the localization of the inflammatory area are closely associated with an increased immunity as evidenced by a rise of opsonic power. We are inclined to attach great importance to these considerations of immunity because we have so frequently observed parallel series of events in therapeutic inoculations with bacterial vaccines in many cases of boils, septic hands, tuberculosis of the glands, bladder, etc.; and in many other cases of localized bacterial infections.

2. From the standpoint of clinical observation of the course of the disease as apparently influenced by inoculation with our vaccine: Whatever surface becomes involved subsequent to inoculation manifests a less severe form of inflammatory process; mental unrest and physical discomfort are rapidly controlled; pyrexia seems to subside more rapidly and long-continued pyrexia has not been encountered; complications and sequelæ seem to be much less common.

We, therefore, submit that the evidence adduced in this communication is sufficient to justify the use of a vaccine prepared from the *Streptococcus erysipelatis* in the treatment of erysipelas, particularly as there is no recognized remedy for this disease.

TREATMENT

In our series of 50, only the first 16 patients were treated according to the opsonic principles of vaccine therapy, but these revealed such a uniformly satisfactory immunizing response and clinical result that we felt justified in attempting the administration of the erysipelas vaccine without the usual blood examinations; and it seems reasonably certain that in the vast majority of cases of erysipelas it will be unnecessary to be guided by estimations of the opsonic content of the blood to determine either the amount of the vaccine indicated or the appropriate time for reinoculation. We are led to this belief because, having once determined a satisfactory method of administration of the vaccine by the close study of the blood in 16 cases we achieved equally successful results in a series of 34 cases of erysipelas, many of which were severe, without having had recourse to the opsonic index in any case. We are, however, appreciative of the fact that in certain severe cases the usual thorough blood investigation may be required.

If we are right, therefore, in our conclusions that erysipelas vaccine when properly administered is a specific remedy for erysipelas, then the importance of being able to omit the laborious opsonic investigations becomes exceedingly great, for it puts into the hand of every practitioner of medicine a new specific for an exceedingly troublesome affection for which as yet only a multitude of remedies of alleged efficacy is available.

It is entirely unnecessary to prepare a vaccine for each case. It is, however, advisable to have a composite stock vaccine derived from several different strains, from as many different cases. It is probable that the more virulent the case of erysipelas the more valuable will its streptococcus be as a vaccine.

Our method of treatment has been, in almost every case, to inoculate with 10,000,000 of the devitalized streptococci on the first visit if the case is a severe one, and with 20,000,000 if it is less severe. On the second day in the severe case the patient gets 10,000,000 more if there be signs of improvement. The most important of these signs is a certain clearing of the intellect, and the others are a lessened intensity of the local condition —less tenderness and pain. The temperature is not so satisfactory a guide, although a fall of 2 or 3 degrees on the morning following the injection is a valuable indication for a second inoculation. If, however, no evidence of improvement obtains in the very severe case and it is impossible to determine the opsonic power of the blood, then 5,000,000 only should be administered on the second day. In less severe cases improvement is almost invariably manifest on the day succeeding inoculation and the patient should receive half the first dose: that is, 10,000,000. We then inoculate with 5,000,000, 10,000,000 or 20,000,000 of streptococci on every second day until a week after the temperature has reached normal and the erythema has subsided. We are guided as to the amount of our dose in each case (when opsonic investigations are impossible or unnecessary) by its severity and the satisfactory results as shown by clinical observation. Our rule is: "The more severe the case and the less satisfactory the clinical response the smaller the dose."

The site of inoculation chosen has always been away from the area involved. Our results have been so successful by this method that we have not felt justified in attempting other measures, such as inoculation near the site of infection.

A MILK-BORNE OUTBREAK OF TYPHOID FEVER TRACED TO A BACILLUS-CARRIER

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The city of Washington and the District of Columbia are one. There is but one government, and there are no "city" boundaries except such as prior to 1871 marked the limits of the then existing corporation of Washington. To the westward of the city, across Rock Creek, there was at that time located a smaller, though older, community known as Georgetown. This, like the city of Washington, has long since ceased to exist as a separate corporation and now forms an integral part of the District of Columbia. Officially it is known as West Washington, but in the ordinary speech of either community it is still commonly referred to as Georgetown. For convenience it will be so designated in this paper. The water supply, the sewerage system, the food supply and the laws and sanitary administration of Georgetown are in no way different from those of the rest of the district. The annual police census of 1907, the latest returns available, gave to Georgetown a population of 17,168 and to the remainder of the District of Columbia 312,423, making the population of the whole district 329,591.

EXTENT AND LOCATION OF OUTBREAK

From October 8 to November 1, inclusive, 1908, there were reported in the entire District of Columbia 135 cases of typhoid fever. Of these, 54 occurred among persons residing in Georgetown. The population of Georgetown, about 5 per cent. of the total population, yielded, therefore, about 45 per cent. of all cases, and during this period typhoid fever was over twelve times as prevalent in Georgetown as it was in the remainder of the district. During the twenty-five days preceding October 8 there were reported in the entire district, exclusive of patients brought in from other jurisdictions, 96 cases, only 4 of which were among the residents of Georgetown; and in the twenty-five days immediately following November 1 there were 54 such cases reported in the district, only 2 of which were in Georgetown. The situation is clearly shown by the following table:

STATEMENT SHOWING THE INCIDENCE OF TYPHOID FEVER IN WEST WASHINGTON, COMMONLY KNOWN AS GEORGETOWN, AS COMPARED WITH THE INCIDENCE IN THE REMAINDER OF THE DISTRICT OF COLUMBIA

	No. of Cases.		*Case Rate per 10,000.*	
Period.	Georgetown.	Remainder of D. C.	Georgetown.	Remainder of D. C.
Prior to outbreak. Sept. 13, to Oct. 7, 1908....	4	92	2.23	2.94
Period of outbreak. Oct. 8 to Nov. 1, 1908......	54	81	31.45	2.46
Subsequent to outbreak. Nov. 2, to Nov. 26, 1908....	2	52	1.16	1.66

Population according to the police census of April 10, 1907: Georgetown, 17,168; Remainder of the District, 312,423.

MILK SUPPLY IN RELATION TO OUTBREAK

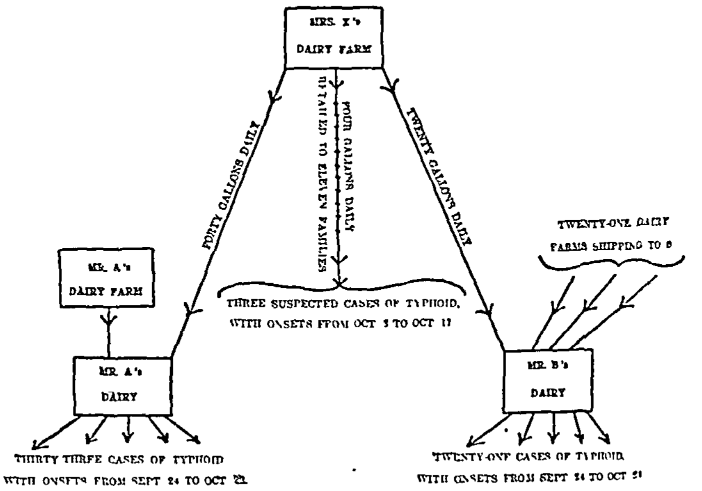
A joint investigation of the reported cases by officers of the Public Health and Marine-Hospital Service and of the Health Department of the District of Columbia showed that of the 54 cases occurring in Georgetown during the outbreak 30 were among persons who during the thirty days prior to onset of illness had consumed milk supplied by dairyman A, and 18 among persons who had consumed milk supplied by dairyman B. Of the remaining 6 patients, 2 used milk supplied by dairyman C, 1 used milk rarely and from various sources, 2 used no milk in any way, and 1 used milk supplied by dairyman D and subsequently boiled. No direct connection has ever been found between these 6 cases and the milk sold by either dairyman A or dairyman B. The last-mentioned case occurred, however, in the same household as 2 of the cases which had used milk from dairyman B and during the two weeks prior to the onset of his illness this patient was in association with the other patients. His infection probably was due to contact.

The milk supply of Georgetown is obtained from certainly more than thirty *different dairymen*. Dairyman C probably supplies more customers than any other dairyman in Georgetown. He serves 292 households, as against 263 supplied by A and 231 supplied by B, and his delivery route ramifies through the same sections of the city as theirs. Among retail customers A distributes daily about 261 quarts of milk, B about 200 quarts, and C about 525 quarts. As there were during the period of the outbreak but 2 cases reported from households supplied by C, and only 2 cases from household supplied with milk from all sources other than those of A, B and C, it is evident that a disproportionately large number of cases of typhoid fever was occurring among the customers of dairymen A and B in Georgetown. Moreover, during this period there were reported among persons living in sections of the city outside of Georgetown 3 cases among the customers of A and 2 among the customers of B. (Another case, the onset of which was October 15, was reported among the customers of B on November 16.) The records of the health department showed no cases in households supplied by dairyman A during the entire twelve months preceding this outbreak, and only 7 among the households supplied by dairyman B.

The period of definite onset of illness of the 33 patients supplied with milk by A extended from September 24 to October 22 and of the 21 patients supplied with milk by dairyman B extended from September 24 to October 24. Two cases secondary to those patients supplied with milk by B had their definite onset on October 22. Early in the investigation it became evident that the spread of the infection had occurred along the routes of the two dealers at about the same time, and a common source of infection for the outputs of these two dairies was suspected.

SOURCES OF SUSPECTED MILK

A's supply of milk was received from two dairy farms, one of which, in the District of Columbia, is owned by him and is the location of his dairy. The other was the farm of Mrs. X in Maryland, from which he received about 40 gallons of milk daily. B's supply came from about twenty-two dairy farms located in various parts of Virginia and Maryland. One of these was the farm of Mrs. X, which also furnished a part of A's supply, and from this farm B received 20 gallons daily. Diagrammatically the situation was as follows:


MRS. X's DAIRY FARM
FORTY GALLONS DAILY
FOUR GALLONS DAILY
RETAILED TO ELEVEN FAMILIES
TWENTY GALLONS DAILY
THREE SUSPECTED CASES OF TYPHOID, WITH ONSETS FROM OCT 3 TO OCT 17
TWENTY-ONE DAIRY FARMS SHIPPING TO B
MR. A's DAIRY FARM
MR. A's DAIRY
MR. B's DAIRY
THIRTY THREE CASES OF TYPHOID WITH ONSETS FROM SEPT 24 TO OCT 22
TWENTY-ONE CASES OF TYPHOID WITH ONSETS FROM SEPT 24 TO OCT 21

A most careful investigation was made, but no history of suspicious illness could be discovered among those who were concerned in handling the milk at the dairy of A, at the dairy of B, or at any of the farms supplying either A or B with milk. All the facts, however, seemed to point to the farm of Mrs. X as the source of the infection.

About 64 gallons of milk were produced on the farm of Mrs. X daily. About 40 gallons (in cans) went to dairyman A, about 20 gallons (in cans) to dairyman B, and about 4 gallons (in bottles) were sold to eleven families along the road which the wagon traveled on its way to A's dairy. A house-to-house canvass was made of the homes to which milk was retailed by Mrs. X. The eleven families consisted of *about fifty-five* persons all told. In only one household was any suspicious illness found. Here a mother and two children were sick. The mother took to her bed on October 3 with a high fever. She remained in bed for about eight or ten days, but was not attended by a physician. Her blood gave a positive Widal reaction when examined at the Hygienic Laboratory on October 16. One child, about 5 years of age, began to complain about October 8, and on October 15 was sick in bed with a temperature of 103.5. His blood on that date gave a negative Widal reaction. The second child, aged about 3, took to bed about October 17. Both children had fever about ten days; in both stomatitis developed a few days after definite onset of fever, and the diagnosis made by the attending physician was "stomatitis." The facts that the onset of the first case was synchronous with the outbreak in Georgetown, and that the patient's blood gave a positive Widal reaction, suggested strongly that this case was typhoid fever whatever the other two cases may have been.

The sanitary condition of the farm of Mrs. X and the way in which milk was handled there were such as not reasonably to preclude infection from reaching the milk (by hands of persons, by flies, etc.) if infection existed on the farm. The dairy-house was located within a few feet of the stable and was not screened. Flies were abundant. The privy was located about fifty feet from the dairy-house. The privy contents went directly on the ground, being partially retained as a heap by a few boards fixed at the back of the privy. Chickens had access to the privy contents and to the yard around the dairy-house, in which milk cans were set. They had access also to the ground around and to the platform over the well from which the farm's water supply was obtained. The well was down hill and about 450 feet from the privy. A few feet from the well was a housed-in spring, and in the spring box the cans of milk were placed to be kept cool. Sand was used for scouring the milk cans and was obtained for this purpose, it was said, from the bed of the stream having its origin in the spring on the place.

Those engaged in milking the cows and handling the milk consisted of Mrs. X, a son, and three hired colored men. In addition to the above there lived on the farm in a house about 1,000 feet from that of Mrs. X and the dairy-house the family of one of the hired men, consisting of a wife and seven children, making on the farm thirteen persons all told. No history of any recent illness among the persons on the farm could be ascertained. The last case of typhoid fever that was known to have occurred on the place was that of a school teacher, who about seven years previously had boarded there. About two or three months after he went to the farm he was taken down with typhoid fever and died. At the time of the investigation the only persons living on the farm who gave a history of ever having had typhoid fever were Mrs. X, who had had it eighteen years before, and one of the employés, who had had it eight years before; but during the attack neither Mrs. X nor the hired man had lived on this farm.

A careful inquiry as to recent sickness on other places in the neighborhood of the farm was made, but no history of any illness could be obtained. As it seemed that there had been no actual case of typhoid fever to account for the infection, and that all the evidence still suggested strongly that there had been infection on this farm, the possibility of some one on the place being a typhoid bacillus carrier suggested itself to us and an investigation with this possibility in view was begun.

DISCOVERY OF BACILLUS-CARRIER

On October 13 specimens of stools and urine from all the persons on the farm were obtained and examined for the presence of the typhoid bacillus. The examinations were made by Passed Assistant Surgeon L. L. Lumsden, assisted by Dr. Walter Cannon, at the Hygienic Laboratory of the Public Health and Marine-Hospital Service. All the specimens were negative for *B. typhosus* except the specimen of feces from Mrs. X. This specimen showed on the Endo plates a large number of colonies typical for growth of *B. typhosus* on this medium. Eleven of these colonies were "fished" and planted in broth tubes. Every one of the eleven colonies proved by subsequent and extensive studies to be of a bacillus which morphologically, culturally and in serum reactions responded typically to all of the tests required to identify it as the typhoid bacillus.

EFFECT OF SHUTTING OFF MILK SUPPLIED FROM FARM OF BACILLUS-CARRIER

The positive finding of the bacillus in the feces was determined on October 16 and on that date the sale in the District of Columbia of milk from Mrs. X's farm was discontinued by order of the health officer. Eight days later, October 24, the last case occurring in the outbreak of typhoid fever among the customers of dairymen A and B had its onset of definite symptoms of typhoid fever.

During the thirty days subsequent to October 24 not a single case of typhoid fever developed among the customers of either of these dairymen, although they continued without interruption to sell milk from all the farms which had been supplying them except that of Mrs. X.

INFECTIVENESS OF BACILLUS-CARRIERS

Unfortunately, Mrs. X so far has declined to submit further specimens for examination, so we can not report now on the persistence of the bacilli in her feces. Her subsequent history in this regard would, of course, throw some light on the question as to whether she is a chronic typhoid bacillus-carrier (and perhaps has been since her attack of typhoid fever eighteen years ago), or whether she was what we may term an acute bacillus-carrier—that is, a person who becoming infected harbors bacilli and discharges them in the excreta for a few days or weeks, and who yet, due to some immunity rendered by previous attack or otherwise, does not have the symptoms of the disease.

If this woman has been a bacillus-carrier since her attack of typhoid fever eighteen years ago it appears somewhat remarkable, since she has been in the dairy-farm business for five years or more, that infection has not sooner reached the milk and caused a pronounced outbreak. Furthermore, the infection, judging by the dates of onset of the cases, seemed to be more or less constantly in the milk for a period of about a month.

One exercising ordinary care as to cleanliness of person, however, as Mrs. X apparently did, would not frequently contaminate directly with fecal matter the milk handled. Then, too, considering the number and duration of the intervals in which the fecal matter of pronounced chronic bacillus-carriers is apparently free of typhoid bacilli, a number of contaminations with fecal matter might be necessary before infection would occur in which organisms alive and virulent, and sufficiently hardy to survive, would be introduced into the milk. If the view is taken that the infection was conveyed to the milk indirectly through the privy contents, which by means of flies or the feet of the chickens or in any other way reached the milk cans or the water supply, it is still readily conceivable that a number of contaminations of the milk with the excreta might have occurred during the several years previous without causing infection. The contamination of the milk with typhoid bacilli once having occurred, it is readily conceivable that the infection could survive on the dairy utensils, and so more or less constantly infect the milk for some days or even weeks.

SUMMING UP OF EVIDENCE THAT THE OUTBREAK WAS CAUSED BY INFECTION IN MILK

1. There was a sudden onset of a disproportionately large number of cases among the customers of the two dairymen supplying the suspected milk.
2. A typhoid bacillus-carrier was discovered among the persons handling the milk on the only dairy farm supplying both dairymen with milk.
3. There was no occurrence of any unusual number of cases among persons living in the same sections of the city as those affected but receiving milk from other sources.
4. There was no occurrence of an unusual number of cases in sections of the city other than those supplied with the suspected milk.
5. Most of the cases occurred among well-to-do persons, and among those who used milk freely, women and children principally being affected. Thus of the 54 patients there were, among those who used milk as a beverage, 30 cases; among those who used it on fruits and cereals freely 20, among those who used it in coffee only 2, and of those who used it as ice cream only 2. There were 15 instances in which the members of the household who used milk freely were affected, while those who used none or used it more sparingly, escaped.
6. Many of the cases had a sudden onset of definite symptoms without recognizable prodromes, and many ran a mild course.
7. All other known possible factors were eliminated as cause common to any considerable number of the cases.
8. The outbreak suddenly ceased ten days after the suspected milk supply was shut off, although all the other suggested possible factors continued, so far as could be learned, about as they were before and during the outbreak.

LESSONS TAUGHT BY OUTBREAK

Had dairymen A and B pasteurized their supply of milk before delivering it to their customers, the infection in the milk received from the dairy farm would have been destroyed and this outbreak of typhoid fever would not have occurred.

Had the sanitary arrangements been perfect on the farm of Mrs. X, and had much greater care been exercised there in handling the milk, the infection might not have reached the milk.

The possibility that there may be typhoid bacillus-carriers among persons handling milk, and the liability that these carriers may get infected excreta on their hands from time to time, should be considered in determining if any degree of cleanliness less than absolute surgical cleanliness would be sufficient to safeguard milk from infection.

To enforce officially such extreme care in the handling of the milk supply of a large city would be a *difficult, if not an impracticable task,* while official supervision of the pasteurization of the milk supply of a large city, if done at distributing depots, would be entirely practicable, much less expensive, and a more nearly certain safeguard against infection.

THE RATE OF COOLING OF SEVERAL POULTICE MASSES *

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The value of poultices for most purposes being proportional to their retention of heat, it appeared desirable to compare the rate of cooling of several poultice masses. A comparison of the easily prepared linseed poultice and the official clay poultice, cataplasma kaolini, seemed particularly desirable and these were controlled most carefully.

Experiments with small quantities in large test-tubes proved unsatisfactory, and the following disposition, suggested by Dr. Sollmann, was finally adopted:

The poultice masses were placed in bottles measuring 6 by 14 cm. to a depth of 9.5 cm. A thermometer was supported in each bottle by a cork. The bulb of the thermometer was adjusted 2.5 cm. from the bottom and 2.75 cm. from the sides. The bottle of cataplasma kaolin was heated in a boiling water bath and when a temperature of 70 to 80 degrees C. was reached the bottle of freshly-prepared hot linseed poultice mass (one part of ground linseed added to two and one-half parts of boiling water) was placed in the same bath. When the mixtures attained a fairly constant temperature, 94 to 98 degrees, they were transferred to a second large but shallow water bath, 2 to 2.5 cm. in depth, kept at 37 to 40 degrees C. The parts of the bottles above the level of the water were wrapped in cotton. This arrangement was thought to approach as nearly as possible the conditions of the poultices when applied to the body. The temperatures were recorded at ten-minute intervals until the temperature of the bath was reached. Three sets of experiments were made, two bottles of each specimen being used in each experiment. Between 85 and 95 degrees the linseed mixture swelled considerably, forcing a small quantity from the bottle, which had to be removed in order that the thermometer might be accurately placed. When the mass cooled a depression was left in the center, which brought the thermometer bulb nearer the surface than in the other mixtures and might have caused an apparent increase of the rate of cooling of the linseed mass.

In another set of experiments the difference in the rate of cooling at the surface and at the center was observed by placing two thermometers in jars measuring 18 by 17 cm. A central thermometer, as in the previous experiment, was placed with the bulb 2.5 cm. from the bottom and equidistant (2.75 cm.) from the sides, and a second, or "outer" thermometer 1.25 cm. from the sides of the jar. The mixtures in the bottles were 8 cm. in depth.

As the two thermometers ran practically parallel with a difference of but 1 or 2 degrees, these experiments, five in all, are classed with the previous experiments.

The results were plotted in curves in which the abscissæ represent the time in minutes and the ordinates the temperatures in degrees C. The curves agree quite closely and are combined as in the illustration, Figure 1. During the first twenty minutes, down to 75 degrees, the temperatures ran fairly parallel; then the temperature of the linseed mixture remained about 5 degrees above that of the cataplasma kaolini until the close of the experiment.

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* From the Pharmacological Laboratory of Western Reserve University.

* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Fifty-ninth Annual Session held at Chicago, June, 1908.

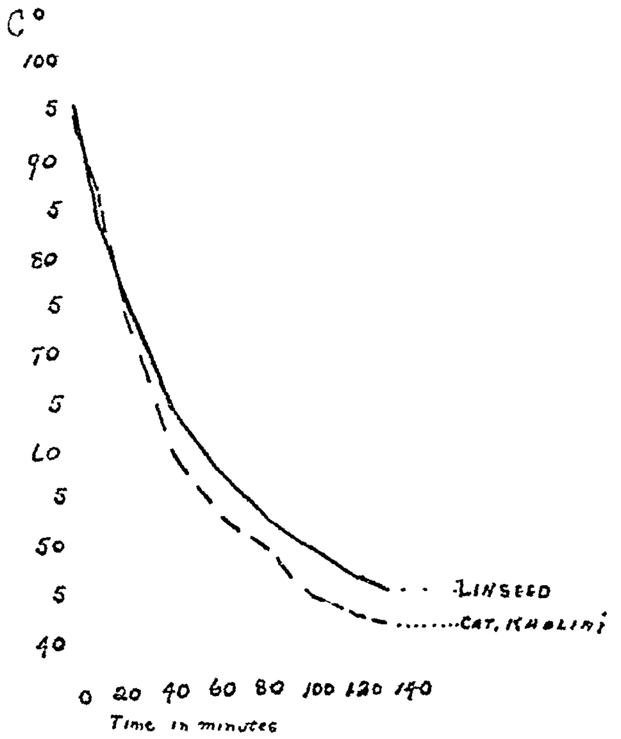

Fig 1.—Curves showing rate of cooling of linseed poultices and cataplasma kaolini, composite of eight experiments.

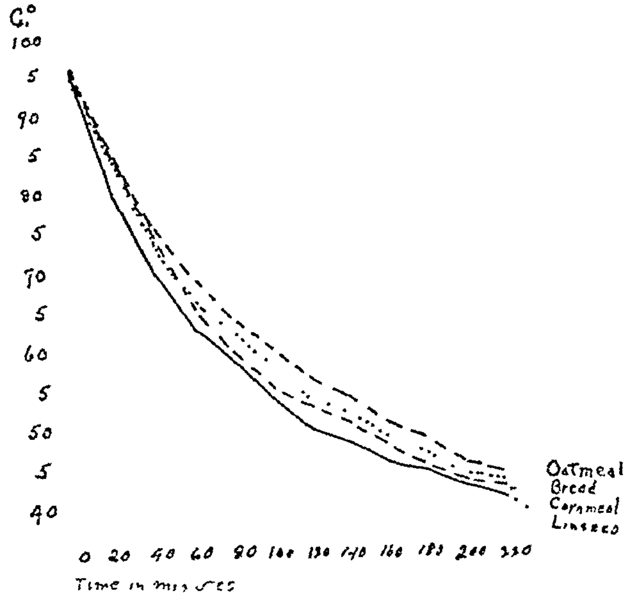

Fig 2.—Curves showing rate of cooling of oatmeal, bread, corn meal and linseed poultices, composite of three experiments

For purposes of comparison a set of three experiments were made with other poultice materials, oatmeal, cornmeal and bread, and water and petrolatum also. The mixtures were made of the same consistency as the linseed mixture. The poultice masses formed a temperature curve similar to that of the linseed poultice, though somewhat higher and from 2 to 8 degrees higher than that of the clay poultice; the petrolatum and water curves were practically the same as that of the cataplasma kaolini, the petrolatum a little above and the water a little below that of the kaolini mixture (Figs. 2 and 3).

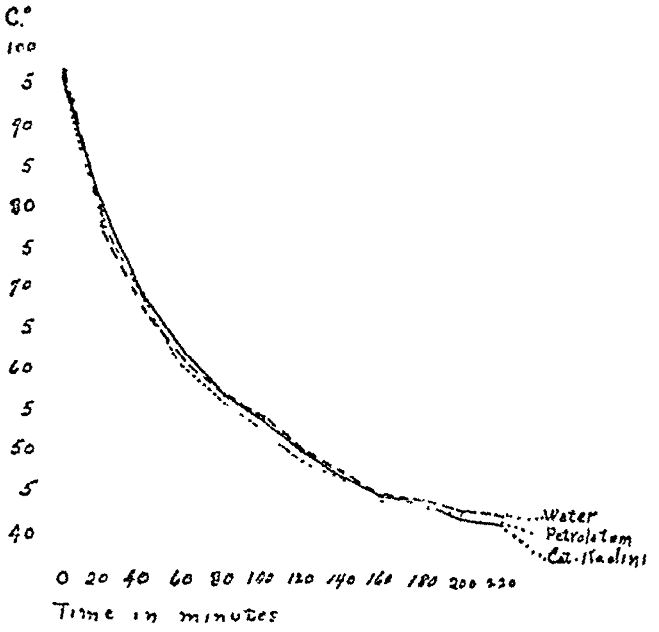

Fig 3.—Curves showing rate of cooling of water, petrolatum and cataplasma kaolini; composite of three experiments

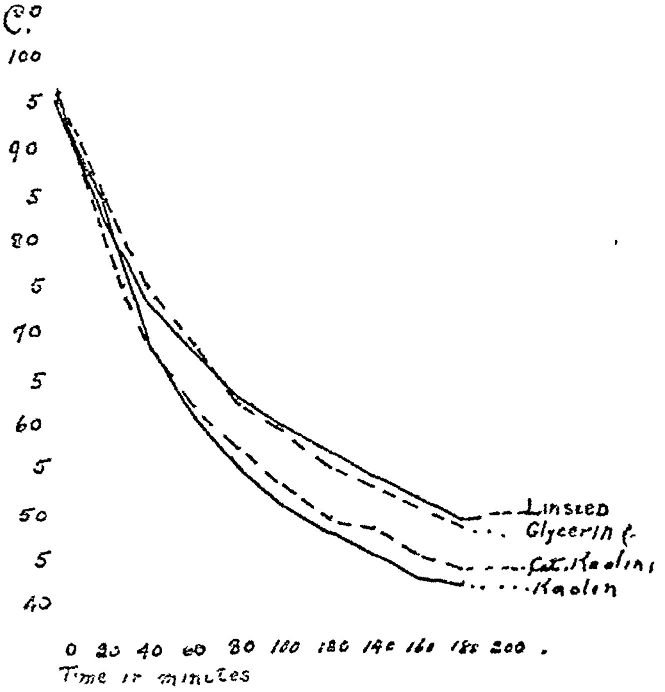

Fig 4.—Curves showing rate of cooling of linseed poultices, glycerin cataplasma kaolini and kaolin, composite of two experiments

To determine if possible the reason for the more rapid cooling of the cataplasma kaolini two experiments were made comparing its chief constituents, glycerin and kaolin (clay) with the official mixture and with the linseed poultice mass. The curves of the linseed mass and the glycerin are practically the same, while that of the kaolin falls somewhat below the clay poultice curves (Fig. 4).

CONCLUSIONS

While the rate of cooling is not conspicuously different for the cataplasma kaolini and the linseed poultice mass, the difference is constantly in favor of the linseed poultice mass.

Dry kaolin cools appreciably faster than the cataplasma, while glycerin cools considerably more slowly.

Other poultice masses, viz., oatmeal, bread and cornmeal, apparently retain their heat even somewhat better than the linseed mass; on the other hand, water cools at about the same rate as cataplasma kaolini and petrolatum a trifle faster.

THE SYMPTOMATOLOGY OF PROSTATITIS *

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The classical symptoms of acute prostatitis are so apparent in every case that I mention them at this time merely by way of contrast to the more varied and protean manifestations of the chronic form. With the exception of rare cases of metastases in acute infections and injury of either the prostatic urethra or the gland itself, our attention in nearly all cases of acute prostatitis is immediately attracted to the cause of the disease, viz.: an acute or subacute gonorrhea. Associated with this we observe the frequent painful passage of a small, feebly ejected stream of urine, often followed by terminal hematuria and leading occasionally to complete retention. Digital exploration per rectum reveals a large, boggy, sensitive prostrate many times the normal size, producing painful defecation, painful erections and deep-seated perineal pain. All these signs are so unmistakable that a diagnosis of acute prostatitis is readily made.

Chronic prostatitis, however, presents a very different picture. In order to arrive intelligently and correctly at the diagnosis of a malady whose manifestations are so varied and at times obscure, it is necessary to have a classification of the symptoms that can be followed as a routine measure. Otherwise we often miss important details. Taylor,[1] of New York, divides the symptoms into two classes: first, those observed in patients mostly under 30 years of age, and second, those observed in older patients. This classification is not without value, for the multifarious symptoms of sexual neurasthenia are usually most pronounced in the younger subjects, while in the older patients the urinary and referred type of symptoms, as a rule, predominate. The preponderance of nervous symptoms in many cases has led Peyer† to classify three neuroses of the prostate as follows:

1. General hyperesthesia of the prostate.
2. Hyperesthesia of the prostatic urethra.

Irritability of the neck of the bladder.

the whole, however, I think that the classification toms as suggested by Young,[2] of Baltimore, is comprehensive and is suitable to all cases les the symptoms into: 1, urinary; 2, sexual, ed.

URINARY SYMPTOMS

The urinary symptoms may be manifested by frequency, often more noticeable at night than during the day; pain at the beginning, during, or at the end of urination; slow or difficult urination; hesitation in starting the stream; urgency and dribbling at the end of urination. These symptoms depend on the hypersensibility of the terminal nerve filaments supplying the prostate, the prostatic urethra, and the neck of the bladder. And as a result the sensory stimuli are produced in such an excess above the normal that there is a lack of coordination in that apparently simple and yet exceedingly complex act of urination, the phenomena of which we must agree with Casper,[3] that we do not yet fully understand.

As an illustration of the urinary symptoms the following case is reported:

Case 1.—*Patient.*—M. R., aged 30, general health good, not anemic or neurasthenic; has never had gonorrhea, and urine does not show any abnormality. About three years ago he began to notice some frequency of urination, and since that time had to get up two or three times every night, and has also had some frequency during the day.

Examination.—This revealed a very sensitive prostate, slightly enlarged and nodular. Prostatic secretion showed numerous pus cells, but otherwise normal elements. Examination showed the urethra to be normal except that the prostatic urethra is excessively sensitive.

That the frequency of urination in this case was due to the chronic prostatitis was shown by the relief of that symptom under appropriate treatment.

SEXUAL SYMPTOMS

The sexual symptoms are usually manifested first by disturbing and often painful erections due to a condition of erethism, which after a time is followed by diminished vigor with imperfect erections, premature ejaculation, frequent nocturnal emissions, etc. These patients are usually neurasthenic. The basis for these symptoms lies in the pathologic condition which is the result of chronic inflammatory changes affecting the terminal filaments of the pudic nerve in the prostate. The phenomena of erection is not fully understood, but experiments on dogs have shown that section of the pudic nerve completely abolishes it.

The following case illustrates this class of symptoms:

Case 2. -*Patient.*--B. W., aged 35, general health excellent and physically very strong, expression indicating strong force of character. He had gonorrhea five years ago. The attack was not very severe and the patient had no complications, but never got entirely well. He noticed intermittent discharge and had some discomfort in the perineum. Finally he began to notice premature ejaculations and gradually the erections became weaker and more imperfect until he was practically impotent. Worry over his impotency eventually produced a deplorable condition of neurasthenia. He tried all sorts of treatment, even the suggestion treatment, but the suggestions did not reach the prostate.

Examination.—This showed urine, first glass cloudy and containing shreds, second and third glasses fairly clear. Occasionally the urine was very cloudy with phosphates. The prostate was only slightly enlarged, but very sensitive, not distinctly nodular, but slightly indurated in region near the seminal vesicles. The seminal vesicles were palpable, but not indurated. The prostatic secretion showed pus cells in considerable numbers, but otherwise normal elements. The urethra was excessively sensitive, especially in the prostatic portion.

A few months of local treatment by vigorous massage, irrigations, sounds up to 33 F., application of nitrate of silver

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Southern Medical Association, Atlanta, Ga.,

urinary Diseases, 1906.

ngton Med. Ann., 1907, p. 101.

Stevens: Johns Hopkins Hosp. Rep,

[3] Casper: Genitourinary Diseases, 1906.

to the urethra and absolutely no medicines internally have improved this patient so much that intercourse is possible and fairly satisfactory, and he confidently expects a complete cure, which I think is reasonably assured

REFERRED SYMPTOMS

Before taking up the referred symptoms a slight reference to the nerve supply of the prostate and the reasons for the interpretations of the referred pains may be permissible The nerve supply of the prostate is only briefly referred to in the various works on anatomy. The prostate receives its sensory spinal fibers through the pudic nerve and sympathetic fibers from the hypogastric plexus. The terminal filaments of the sensory fibers in the prostate and prostatic urethra are endowed with genital corpuscles or end-bulbs of Krause Young[2] states that he has found beneath the dense tissue of the capsule of the prostate numerous nerve bundles containing large numbers of ganglion cells. Viktor Blum[4] says that there are in the periprostatic tissues surrounding the true capsule many corpuscles similar to the end-bulbs of Krause

With such an elaborate and highly specialized apparatus for the reception and conveyance of sensory impressions we can readily understand the influence which this organ exerts on the individual Through the influence exerted on these highly specialized and sensitive nerve-endings by the pathologic conditions resulting from chronic inflammation, painful impressions are carried along the afferent sensory fibers and by an irradiation, or sort of overflow, are felt in the area of distribution of those somatic sensory fibers taking origin from the same spinal segment as the visceral sensory fibers supplying the prostate

Many writers have quoted Head as saying that the prostate receives its spinal sensory fibers from the three lower dorsal and upper three sacral segments It seems paradoxical that the lumbar segments should be skipped Piersol,[5] in a more recent investigation, states that the prostate receives its spinal fibers through the pudic nerve, which receives most of its fibers from the second, third and fourth sacral, but also receives some fibers as high as the fifth lumbar Thus we can readily understand the meaning of intense pruritus ani through the inferior hemorrhoidal nerve, the pain and feeling of weight in the perineum through the perineal nerves Patients with chronic prostatitis very frequently suffer with pains in the back and down the legs, which is often diagnosed as lumbago and sciatica, but which is, in fact, referred pain from the prostate and is readily explained by the intimate relation existing between the roots of the pudic nerve with the sacral and lumbar plexuses Cases have been reported in which the symptoms simulated renal colic so closely that nephrotomy was performed and no stone found, the patients were afterward cured by prostatic massage

The following case illustrates well-marked referred symptoms·

CASE 3 —*Patient*.—L G aged 43 had several attacks of gonorrhea fifteen years ago The attacks were not very severe but he never recovered entirely About two years ago he began to suffer with pains in the back and down the legs Condition grew worse until walking was decidedly painful He was treated for rheumatism and sent to Hot Springs for a while but had no relief

Examination.—This revealed a prostate, enlarged, firm, nodular, indurated at upper and outer poles and sensitive to pressure The fact that this prostate was firm and resistant to touch indicates a process of long standing in which much of the round celled infiltration had become converted into fibrous tissue The prostatic secretion showed enormous numbers of pus cells and very few lecithin bodies The secretion from the seminal vessels showed many motionless spermatozoa

Several months of treatment by prostatic massage, irrigations Kollman dilator, etc, has improved the motility of the spermatozoa, improved the patient's general health and relieved to a great extent his pains The chronicity of the case, however, and the amount of new formed fibrous tissue in the prostate do not make me very sanguine as to a complete cure, at least so far as the anatomic structure of the prostate is concerned

RESIDUAL URINE

A symptom that is sometimes observed in chronic prostatitis that is especially interesting is the presence of residual urine. The following case recently came under my observation

CASE 4 —*Patient*.—H J, aged 44, never had gonorrhea Five years ago he had a very severe attack of dysentery, which was diagnosed as amebic dysentery One year later he had another attack and the following year another Ever since the first attack he suffered with frequent painful urination which became progressively worse until he urinated almost every hour during the day, and the act of urination was attended with violent straining

Examination.—This revealed a prostate slightly enlarged sensitive and nodular. The prostatic secretion showed many pus cells The urethra was sensitive, but a 28 F sound could be passed into the bladder, and a Kollman dilator in the posterior urethra could be opened to 31 F The residual urine present amounted to 300 c c, which amount was found on several occasions The bladder capacity was 400 c c During sleep the vesical sphincter apparently relaxed and the urine flowed out without the knowledge of the patient Catheterization immediately after sleeping showed only a small amount of residual urine With the assistance of Dr Fowler, cystoscopy was performed, and we found a bladder markedly trabeculated, numerous small diverticuli being seen between the trabeculæ, giving evidence of the intense straining efforts of urination No stone was found The lateral lobes of the prostate were slightly enlarged, a small furrow showing in the upper anterior margin of the vesical orifice There was a slight median bar present which could not be felt per rectum The amount of residual urine present, however, was out of all proportion to the amount of obstruction and was due to the spasmodic contraction of the vesical sphincter This, in turn was the result of the chronic inflammatory changes in the prostate

Obscure vesical symptoms are often the prodromes of locomotor ataxia, and patients in the early stages of this disease frequently consult the urologist before they do the neurologist In the case just narrated, however, there was no history of syphilis, the knee-jerks were normal, there were no lightning pains, and no unsteadiness of gait, pupils reacted to both light and accommodation In short, I think we can safely exclude tabes.

POSITIVE SIGN OF CHRONIC PROSTATITIS

In most cases sufficient symptoms are present to direct our attention to the prostate at once There are some cases, however, in which no definite symptoms are present, or at least the symptoms are so slight that the patient is entirely unaware that he is suffering from any prostatic trouble Rectal examination usually shows some irregularity of the surface of the gland, slight enlargement, induration, nodulation or excessive sensitiveness These signs too, may also be lacking in some cases

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[4] Blum Viktor Symptomatologie der urogenitalen Erkrankungen 1908

[5] Piersol Anatomy, 1907

There is one definite positive sign, however, which is always pathognomonic of chronic prostatitis, and that is the presence of pus cells in the prostatic secretion.

The normal prostatic fluid presents some very interesting features. Macroscopically, the prostatic secretion is a grayish or bluish-white, homogeneous, opalescent fluid, either slightly alkaline or amphoteric in reaction. If in the process of obtaining the fluid for examination some of the secretion of the seminal vesicles is also expressed it is recognized as semisolid, transparent masses. In a very few minutes, however, this is liquefied by the prostatic secretion and becomes intimately mixed with it.

Microscopically, the most striking feature of the prostatic secretion is the presence of large numbers of lecithin bodies; in fact, they make up the bulk of the secretion. They are seen as small round bodies, of various sizes, usually smaller than a red blood corpuscle. Their composition is exceedingly complex, but, broadly speaking, they may be regarded as a phosphorized, fatty substance. The other elements noticed are epithelial cells, some granular cells in which no nuclei can be demonstrated and whose origin is in doubt. Occasionally corpora amylacea are seen. In addition to the elements named, Wederhake has called attention to small bodies often seen which are of uniform size, smaller than an ordinary leucocyte, and whose origin and significance are not known and to which he has given the name of *Samen-Kornchen*. Young has also described another element, minute bodies, smaller than the lecithin bodies, and whose origin and significance are also unknown.

The very interesting experiments of Nagel[6] have demonstrated the value of the prostatic fluid in maintaining the life and motility of the spermatozoa. It is more important than is generally supposed. He has found that the spermatozoa when separated from the prostatic fluid rapidly lose their motility and die. Mixed with prostatic fluid, however, they maintain their vitality for days and can even resist for a time the effect of strong acids and alkalies. It has also been shown that motionless spermatozoa have resumed their motility when mixed with prostatic secretion even from another individual. The prostatic fluid also acts as a lubricant. The substance in the prostatic fluid which protects and vitalizes the spermatozoa is in all probability the lecithin bodies.

In chronic prostatitis, simultaneous with the appearance of pus cells, especially in large numbers, we notice the diminution of the lecithin bodies. In severe and very chronic cases, the lecithin bodies are often entirely absent and the spermatozoa, if present, are motionless. This disappearance of the lecithin bodies probably explains the sterility of men suffering from severe and long-continued prostatitis. Strangely enough, in favorable cases, the reappearance of the normal lecithin bodies and the disappearance of the pus cells seems to progress *pari passu* with the improvement of the patient.

MICROSCOPIC STUDY OF PROSTATIC FLUID

The microscopic study of the prostatic fluid presents peculiar difficulties. For while macroscopically it is a homogeneous fluid, microscopically it is found to be decidedly heterogeneous. Chemically it is a mixture of proteid and fatty substances and salts of various kinds, especially phosphates and carbonates. On account of this complexity of composition smears made and stained in the ordinary way are not satisfactory, the salts especially interfering with the staining. After numerous experiments with various methods I have found the following plan satisfactory:

Patients are always instructed to come to the office with a full bladder, and the urine is passed just before the massage. The secretion is allowed to fall into a small glass and the macroscopic appearance first noted. Any lack of homogeneity indicates some pathologic condition, and shreds or flakes of pus are often seen. Even to the practiced eye, however, the secretion may appear perfectly homogeneous and yet contain pus cells. A drop of the secretion is placed on a slide, covered with a cover glass and examined with a 1/6 objective. The normal elements are all easily seen and pus cells, if in any amount, can also be seen.

If the pus cells are few in number and not very distinct, the second step is now resorted to. A drop of the secretion is placed on a slide, and on this is placed a drop of solution of methylene blue, which has been strongly acidulated with acetic acid. This, of course, stains only faintly, but it brings out the nuclei of the pus cells beautifully, and if there are any pus cells on the slide they can easily be found.

If now a further study of the cytology and bacteriology of the secretion is desired, the third step is resorted to. The secretion is placed in a centrifuge tube and the tube filled up with normal salt solution. The tube is inverted several times to mix the contents thoroughly, and then placed in the centrifuge for a few minutes. The supernatant liquid is now pipetted off and more salt solution added and again placed in the centrifuge for several minutes. This can be repeated if necessary. A smear made from the sediment can now be stained and examined satisfactorily. This plan is especially valuable for the detection and recognition of the various bacteria.

SYMPTOMS OF CURE

We finally come to what are probably the most important and interesting of all the symptoms; that is, the symptoms of cure. As pointed out before, the subjective symptoms may all be present and yet the prostate be chronically inflamed. As a rule, however, under appropriate treatment, the enlarged, nodular, sensitive prostate gradually becomes more normal in size and consistency and less sensitive to touch. In patients with marked subjective symptoms the improvement in the patient's morbid sensations seems to progress *pari passu* with the improvement in the pathologic conditions in the prostate.

The question as to whether or not in a prostate, once inflamed for any length of time, especially if the deeper structures of the gland are involved, do the pus cells ever entirely disappear, is still *sub judice*. In some cases at least they persist for a long time.

The reappearance, however, of the lecithin bodies in normal amount and the progressive decrease of the pus cells is always a good omen. The spermatozoa are not unfavorably affected by the presence in the prostatic secretion of pus in small amounts, especially if the normal elements of the prostatic fluid are present. This is particularly true as regards the presence of the lecithin bodies. A prostate in which part of the secreting structure has been destroyed by chronic inflammation and the normal parenchyma replaced by fibrous tissue, of course, remains in that condition for all time. But the prostate seems to possess that compensatory power with which Nature has endowed our other organs so that unless too much of the glandular parenchyma has been destroyed the secretion is still produced in quantities sufficient for the fulfillment of the normal physiologic function of the gland.

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[6] Nagel, W.: Handbuch der Physiologie des Menschen, 1906.

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TREATMENT OF TUBERCULOUS PATIENTS IN THEIR HOMES AND IN PLACES OTHER THAN SANATORIA

WITH SPECIAL REFERENCE TO THE PSYCHIC SIDE OF THEIR MANAGEMENT *

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When requested to prepare a paper on the home treatment of tuberculosis, I felt some hesitancy in acceding, not because the subject was not of great interest to me, but because it has been associated by some of the profession with the views of those who believe that pulmonary tuberculosis can be better treated in the patient's home than in the very best of climates elsewhere.

Such a view is so much opposed to my experience, and to that, I believe, of the profession as a whole, that I would not wish to seem to support it. If the term, however, as my title implies, is used to describe the treatment of tuberculosis outside of closed sanatoria, whether in the patient's home town or in some especially favorable climate, and deals with obtaining for all patients those advantages which were supposed to be obtainable only in special institutions, it is a subject which interests me deeply and one on which I am glad to have an opportunity to write, for it is certainly one of the most important in therapeutics and must be solved if we are to succeed in suppressing this disease:

Hygienic and dietetic treatment is to-day universally recognized as an essential part of the management of pulmonary tuberculosis, and whatever advances we have made, or may yet make, in specific and drug therapy, hygiene, air and diet may be safely stated to be a fundamental part of any complete and satisfactory treatment.

These methods were worked out originally in closed sanatoria by such men as Brehmer, Dettweiler, Trudeau and many others, and it was long the general impression that they demanded the special facilities of such institutions and could not be carried on properly outside of their walls. Patients in their own homes or living in climatic resorts, but not entering such sanatoria, have too often been allowed to live very much as they wished, with no properly strict supervision or discipline, and the difference between the results obtained in cases of patients handled in this slipshod way and those systematically treated in institutions has been used to support this view.

Being dissatisfied with the manner in which these invaluable methods were ordinarily applied in private practice, and yet convinced of the absolute necessity of their use, I have for a number of years tried to secure for my patients in private houses the general hygienic arrangements and the teaching and disciplinary measures of the closed sanatorium, with results which have satisfied me that we can obtain for our patients, outside such places, all their essential conditions and their results. Indeed, in view of the very limited capacity of all the institutions of this sort, the outlook for the majority of the tuberculous, were this not true, would indeed be sad, for but a small fraction of them could possibly get accommodation in such sanatoria. Hence it becomes a duty to encourage the adoption of such methods everywhere, and to urge the profession to acquire that skill in handling pulmonary tuberculosis which has given sanatorium physicians their excellent success; in short, to teach doctors how to manage the hygienic cure outside of closed sanatoria.

This, then, I take it, is the real aim in the home treatment of tuberculosis: a treatment which is equally applicable in or out of climatic resorts, and whose value in no way affects the question of the utility of climatic treatment, which, therefore, need not be touched on here.

SPECIAL CONDITIONS OBTAINED IN SANATORIA

Since, as noted, this treatment was first and most fully developed in sanatoria, it will be well to consider what are the special conditions which are obtained there in order to see if these can be secured adequately outside their walls.

Analyzed, then, to their simplest terms, these are:

1. The personal medical oversight of the patient.
2. Strict discipline and close supervision.
3. Teaching and instruction in methods of life.
4. The systematic and hygienic arrangement of the patient's life.
5. Nursing.
6. Proper housing, location and feeding.
7. Suitable climate.
8. The effect of the example of other patients and of the *esprit de corps*.

Of these eight desiderata, all save the invaluable effects of the last two can be had in all cases, granted a determined and forceful doctor and a reasonably intelligent, earnest and obedient patient, in fairly good circumstances. True, to obtain them in a satisfactory degree will unquestionably call for much work on the part of the doctor, a great interest in his cases, and a strong will; for a chronic disease, such as this is, makes great demands on the patience and perseverance of both physician and patient; but if the doctor is willing to enter closely into the lives and to study the personality of his charges—and only he who is so willing can succeed with them—he can get a complete control of them, and will find pulmonary tuberculosis as interesting and, if early diagnosed, as hopeful as any other disease; nor will he discover any of that monotonous sameness which is supposed to characterize it.

Let us now consider, seriatim, these different conditions which are obtainable in sanatoria.

1. *Personal Medical Oversight.*—That this is essential, all who have handled tuberculosis will recognize; hence these patients must not be left to manage their lives according to their own best judgment, with perhaps occasionally a little general advice, but need to see the physician often and to receive instruction and stimulus from him. Many would suppose that unless the physician lives in the house with his patient, seeing him frequently during the day, as does the sanatorium doctor, personal medical oversight could not be had, but I have found this not to be the case. If the physician is capable of impressing his will and his personality on

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* Read before the Clinical Section of the International Congress on Tuberculosis, Washington, D. C., Oct. 2, 1908.

his patients he can get the closest and most detailed supervision and control of their lives by seeing them twice, or at most thrice, a week; when they are once well trained once a week is sufficient. Indeed, by seeing our patients too frequently, as we do if we live in the house with them, we are apt to lose that objectivity in our attitude toward them which is so important, and to lessen rather than to increase our control.

If the patient is well taught the aims and purposes of the treatment, is convinced of the doctor's interest in his case, and knows that he must report to him every occurrence in a written diary of his life, it is surprising how close the supervision can be. The use of such diaries or record-books is a most important aid in the control of our cases, and it is difficult to keep in sufficiently close touch with patients without their use.

I have used record-books now for a number of years and find that they keep the doctor in most intimate touch with the feelings as well as doings of his charges, and that through them he will learn many things very closely affecting their condition, which it is important for him to know, yet of which otherwise he would never hear. The patient writes not merely a physical record of the fluctuations of his temperature, the amount and nature of his food, exercise and amusements, etc., for all of which there should be places in the page, but—and I believe this even more important—a diary of his mental life and of those occurrences of the day which affect not so much his body as spirit.

Such records are of inestimable benefit to the doctor in helping him to understand his patient and to guide him wisely, for in no disease is the effect in mind over body more in evidence than in pulmonary tuberculosis. We can not succeed with it if we treat the physical but neglect the mental side of our charges.

In a small percentage of one's patients, the very nervous and excitable, such as are so often our Jewish patients, or in those lacking the moral backbone to face the facts and fight them, their nervousness can be increased by such record-keeping. By such patients the practice must be discontinued, but in a very large majority the keeping of such diaries proves helpful and interesting to the patient, aside from its value to the doctor, and I have had many people assure me that keeping their records stimulated them to obedience and to more faithful living.

The more intelligent the patient, the better will these books be kept; some patients are able to give us a vivid account of all that happens to them so that we can know exactly all that they felt and did; some are only able to record the bald physical facts of the day, and this poorly enough; while the majority keep a diary which, while not as full as it might be, is a great help to us in following their lives. I devised these record-books to be used by patients in private practice, and I had not supposed that they would be applicable to the class of patients whom we see in our dispensaries, who are usually of a lower grade of mentality. Dr. Joseph Pratt of Boston, however, who has adopted them in his admirable tuberculosis class work, has shown that they can be used with most excellent results in these patients, and through his instrumentality they have been pretty extensively and successfully used in numerous other classes and dispensaries throughout the country.

By using such books, whose entries should be carefully scanned at each visit, and by seeing our cases once or twice a week, we can make the supervision of the patients perfect, and they will become so interested in their own progress that the treatment is deprived of much of the tedium that can handicap it.

2. *Discipline and Supervision.*—Many excellent physicians are poor disciplinarians, neither giving such detailed instructions as are necessary nor seeing that they are strictly carried out. This, however, is a matter of the personality of the physician and does not depend on whether he treats his patients in private or in a sanatorium. Discipline, however close the supervision may be, must rest, save in penal institutions, more on the good will and willing cooperation of the patient than on his fear of punishment. While the doctor must have a strong will and be a good disciplinarian, and while the patient should be afraid to disobey him, the discipline will be hollow and unreal if it depends only or chiefly on fear, or is maintained by spying. It can be satisfactory only when the patient obeys willingly from motives of self-interest and through his confidence in the physician. When such a feeling of confidence toward the doctor exists, and when the patient is made to realize that he and his physician are fellow workers toward the same end, and that by disobedience he is only hurting his own chances; when, moreover, he is made to see that getting well is no child's play, and that if he is to recover he must have the force to deny himself, the doctor need have no fear that his orders will be disobeyed behind his back. No sanatorium can show better discipline than can be obtained with patients thus trained.

3. *Teaching.*—In tuberculosis the relation of the doctor and his patient is, in one aspect, that of teacher and pupil, the latter coming not merely to regain health, but to learn from the former those truths which in after life will enable him to retain the health he has regained. Hence the physician who treats tuberculosis must be, I had almost said first and foremost, a teacher, and, like every good teacher, interested and hence interesting and capable of imparting his knowledge and his enthusiasm.

Granted the ability on the doctor's part to teach, instruction outside of the sanatorium can be most thorough and satisfactory, although, unless the patients are housed together, the individual patient will lose that not inconsiderable part of his teaching which he would receive from the example of his fellows. Many physicians do not believe that their patients should know anything about their sickness; but in tuberculosis, as Penzoldt[1] and many others have insisted, it is essential that the patient should understand something of the nature of the disease he has to fight before he can be expected to deny himself the many pleasures he must forego or bring himself to live a strictly regulated life. While it is by no means desirable that the patient should know too much about the extent of his trouble, he will fight his disease more intelligently and, therefore, better if he knows something of the wonderful way in which Nature opposes the advance of the enemy and how her ability to wage a successful warfare depends on the vitality of the individual cells, whose strength or weakness is so largely under his own control.

4. *Systematic and Hygienic Living.*—While it will take great care to secure, outside of a sanatorium, the system and order of such an institution, they can be obtained if the patient be intelligent and the doctor painstaking. He who makes a listless, half-hearted,

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[1] Penzoldt and Stintzing: *Handbuch der Therapie Innerer Krankheiten*, iii, Jena, 1898.

planless attempt to recover from tuberculosis is sure to fail, but, granted the conditions already dwelt on and a careful oversight by the physician, the individual patient can systematize and live his life as well as those in sanatoria.

5. *Nursing.*—The necessity of trained nursing in pulmonary tuberculosis depends on the nature of the case. In my opinion, in incipient cases a nurse is not necessary at all save during some intercurrent condition, such as an exacerbation of the process or a hemorrhage; but the patient is rather the better for being thrown on his own responsibility and made to think for himself. In advanced cases with much fever, diarrhea, etc., a trained nurse is a necessity and an inexpressible comfort to the sick one, but, save in such cases, her constant presence while the patient is feeling well is a depressing reminder of sickness. Hence it is better to dispense with nurses, save in the cases cited.

6. *Location, Housing and Feeding.*—It is not always easy to secure for patients, especially if in restricted circumstances, either in their own homes or in resorts, accommodations which are as well arranged as to porches, rooms, orientation, ventilation, etc., as those in the best sanatoria; but it is surprising what excellent facilities we can obtain for our patients by some study of their homes and rearrangement of their surroundings. If a large southern room, with several windows and a porch opening off from it, can be had, sanatorium conditions can be duplicated; but, if not, by ingenuity in a rearrangement of houses and porches, or the building of shacks, excellent results can be obtained. For those in comfortable circumstances the task is easy, but in proportion as the circumstances of our patients are more and more restricted it becomes more and more difficult, and there is a point below which their financial state sets an almost hopeless handicap on the proper carrying out of this treatment.

Among that large class whose finances prohibit their leaving their home town much has been done in recent years in Boston, New York, Philadelphia, Chicago, Baltimore and elsewhere, either by removing the patients to the outskirts or by rearranging their homes, and the various tuberculosis dispensaries and classes in this country have done splendid work in this line.

The feeding of a patient, whether in or out of a sanatorium, depends on the availability of a good cook and housekeeper, a good market and a not too empty purse, and if these can be had, a good and varied table is always obtainable. The feeding of these patients, however, is so important that the doctor must take pains to satisfy himself as to the existence of these conditions and not take them for granted.

7. *Suitable Climate.*—It is neither appropriate nor desirable at this time to enter on the much discussed question of the essentiality or non-essentiality of climate in the treatment of pulmonary tuberculosis. My own view is that climate, while it will always be a secondary factor to proper care, discipline and feeding, is an invaluable aid in the treatment of this disease; one which, in all cases which offer possibility of cure, should never be dispensed with if means permit, and that with proper conditions it will greatly improve the best results that can be had in a patient's own town. Practically all sanatoria are in unusually favorable country climates, and most persons will admit that, other things being equal, a patient will do better the better the climate in which he is placed. While we try to place our sanatoria in favorable climates, however, and while those who can afford to get proper conditions there would be foolish not to avail themselves of the added advantages offered by a good climate, the vast majority of pulmonary tuberculosis patients are compelled by financial reasons to find recovery, if it be possible, in their home town. In the last two or three years many workers in this line have shown what can be accomplished in the way of amelioration, arrest, of even cure, in our large cities if the cases be favorable and if the physician be only thorough, painstaking, interested and a good teacher.

8. *Effect of Example and of "Esprit de Corps."*—The one important factor in the hygienic treatment which can not be had when we treat the patient in his own quarters is the effect on him of the example of other patients and of that *esprit de corps* which is developed among them, and both of which are powerful factors in sanatorium results. However intelligent and purposeful, determined and obedient, the patient may be, he will miss much in not having the stimulus which is obtained from living with other patients who, like himself, are seeking to recover health and whose example will constantly urge him on to the proper life. All who have handled many patients together know the great assistance which is obtained from the rivalry between them in taking the cure faithfully, the brace to a weak will of the example of others, the encouragement to the discouraged from the good results in other cases and the mutual assistance of that spirit which animates them all.

True, the single patient is free from the depressing effects of that curse of the pulmonary invalid, symptom-talking, but this is more than counterbalanced by the tendency of the lonely patient to brood over his own troubles and to introspect. The only way in which I have been able to get around this difficulty has been, wherever possible, to place a number of patients together in a properly managed house rather than each in his own house. In such houses they get the benefit of example, etc., though free from the institutional atmosphere which is so distasteful to most American patients, and the brightness and cheerfulness of these houses, if the inmates are properly chosen, is a very great help in the treatment. Therefore, whether in our cities or in resorts, I believe that wherever possible we should try to place our patients together. Unless they will give it a trial, however, it is often hard to convince people that such association with others will not be depressing and dismal; though if we are very careful to place incipient cases only with the incipient and the advanced with the advanced, so as to avoid the discouraging effect which their difference of condition can have on the patients, the fact is just the contrary, such houses being unusually cheerful and bright. It need hardly be noted that the doctor must also display tact in sizing up differences of social condition in his cases, as by placing together patients too widely separated in this way there is pretty sure to be friction, dissatisfaction and trouble.

If the patient must be handled alone in his own house, as will usually be necessary in our cities, or with those who are too fastidious to mix with others whom they consider less elegant than themselves, the difficulty arising from the lack of example can be overcome only by redoubled efforts and more careful teaching on the part of the physician, and by more self-control and intelligence on the part of the patient.

As the result of these considerations I believe that it is evident that, save for the beneficial influence of example and of climate, all the conditions obtained in sanatoria can be secured for patients outside of such institutions. I would here, however, make an exception of our very poorest classes and of our criminal poor. For these, owing to conditions not controllable by the doctor, there seems little hope unless our sociologists and philanthropists step in and change or improve for them those surroundings and habits under which they live and which lie at the root of their sickness. For them the treatment of tuberculosis is primarily a sociologic problem, and the doctor's part in it, however important, is necessarily secondary to that of the civic and social reformer.

Of course, in applying sanatorium methods, as they have been called, the physician who is used to the treatment chiefly of acute diseases will find considerable trouble, for the former demands far more detail work than the latter, and most doctors find it hard to keep alive their interest in a case after the acute symptoms subside and the changes, instead of being visible from day to day or from hour to hour, are to be discovered only from month to month or at even longer intervals.

It is unquestionably troublesome to have to adjust every small detail of the patient's life, and to fill to some degree the functions of the nurse as well as the doctor, and it is to be feared that the majority of practitioners will therefore always find the treatment of tuberculosis tiresome and unsatisfactory; but it is only by such work that we can expect to get good results.

THE PSYCHIC HANDLING OF THE PATIENT

Turning our attention now to the application of these methods in the home treatment of tuberculosis, it is evident that, since a patient has not merely a body but a mind and a soul, there are two distinct aspects in which this treatment can be regarded, the physical and the psychical; the former concerned with the arrangement of the details of the patient's life and surroundings, the nature of his exercise and rest, his dietary, amusements, occupations, etc.; the latter dealing with his mental capacity and his attitude toward his sickness, his spirit, courage and will, and his relation to his physician. The physical part of the treatment is, of the two, the least difficult to carry out and is more generally understood. I have, moreover, very fully treated of it elsewhere,[2] as have many others, and it is to-day familiar to all, so that it would be superfluous here to consider its various details. The psychic side of the treatment is much less fully understood and more frequently neglected; it is the part which will give us the most trouble when we treat patients outside of sanatoria, yet it is essential to the success of the treatment. Hence I shall here confine myself to a consideration of it alone.

It may be approached from two points of view, the one relating to the patient, the other to the doctor, and I shall here dwell on the qualities which each will need if the home treatment is to be as successful as that in a sanatorium.

The qualities needed by the patient are, in the order of their importance, (1) will power and determination; (2) earnestness and purposefulness; (3) cheerfulness and patience, and (4) intelligence and interest.

1. Of these, will power and determination are unquestionably the first; in their absence the lightest case becomes severe, while with them even a desperate one may have hope. When I speak of will power I refer *not merely*, or chiefly, to that more ordinary type of will which is able to impose its wishes on others, but more especially to that higher type which can turn its *will inward and conquer itself*, which can force itself to the difficult denial of pleasure for profit, which can obey tedious orders strictly and closely, and which can compel cheerfulness when all around seems dark. When the patient possesses such a will his physician is, indeed, fortunate; but the doctor should never forget that, even when it is more or less poorly developed, it is in the physician's power to cultivate it, and that he can arouse and enlarge a dormant or ill-applied will and direct it into right channels, and this cultivation of the will in a wise direction is one of the doctor's most important and inspiring duties. What more splendid than to awaken will where before it was latent, interest where there was apathy, purposefulness where there was vacillation, and thus to bring victory out of a case that otherwise would be hopeless? We are not seldom made to realize, however, that if the moral backbone of the patient be below a certain level, such induced will and earnestness will exist only as long as the patient keeps in touch with his source of power, and that if this is removed he will relapse into his original weakness and spinelessness. Such patients, whatever their physical condition, are hopeless, this being a good example of the survival of the fittest; fortunately, however, they are few.

2. Next to will and determination I would place earnestness and purposefulness. The light-minded patient, incapable of following a fixed aim persistently, who can never frankly face the facts, who is never in earnest about anything, and who lacks any comprehension of a serious purpose in life, is a difficult problem for the doctor, for such qualities are not easily developed where they are lacking. It has often seemed to me especially difficult to develop earnestness in young girls or in unusually attractive women accustomed to much attention, for too many of them in these days look on life merely as a playground in which to amuse themselves, and can not be brought to regard it as a field for noble, if arduous, work.

3. Cheerfulness is an invaluable quality, while not essential, for many earnest and excellent patients seem to lack it constitutionally, but it can be cultivated to a great extent by the will. The patient who is grateful for every smallest gain and does not magnify every loss; who picks out each speck of sunshine to enjoy and tries to shut his eyes to the dark places; who goes into the fight not whining and believing he will be beaten, but bravely and hopeful of victory, has already taken a big step toward recovery. It is often inspiring to the physician to see how a patient will labor for cheerfulness and for a sunny point of view when his doctor knows so well how many causes he has for discouragement and despondency. Such people are a blessing to the households in which they live and serve as a source of sunshine to all around them. In this connection it should be noted that the families and friends of our patients should be taught and compelled to keep from them all those sad and depressing occurrences which they seem to take such a pleasure in recounting to the sick ones, either by letter or by word of mouth, thus needlessly and harmfully depressing them, the stupidity of people on this score being sometimes beyond comprehension.

Patience, in a disease which runs so slow a course as pulmonary tuberculosis, is most important, and he who can quietly and patiently live each day as it comes, uncomplaining and unfretting, will be a comfort to his doctor and a help to himself.

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[2] New York Med. Jour., January, 1899; December and January, 1902; Ztschr. f. Tuberk., 1902, vi, No. 6.

4. All authors dwell on the importance of intelligence in a patient; it is of scarcely less weight than the qualities already dwelt on, and, is, indeed, almost inseparable from some of them. There are few things harder for the doctor than to sit opposite a patient whom he is trying to interest and instruct in his own case, and to be unable to awaken one ray of intelligence, comprehension or interest in his dull, impassive eyes, or to make clear to him the simplest details of his treatment. Such patients can not be made to grasp the principles of their cure properly or to take that live interest in it which is so important; they not only obtain poor results for themselves but are a dead weight on their physician. On the other hand, the intelligent, wide-awake patient who, even if uneducated, responds to efforts in his behalf by a prompt comprehension and cooperation, who grasps the physician's aims and helps to further them, is not merely doing much to assure his own recovery, but inexpressibly lightens the doctor's work.

This lack of intelligence in the patient is one of the severest handicaps on our tuberculosis dispensaries and classes, when, as is so often the case, their clientele is drawn chiefly from the ignorant foreigners who crowd some sections of our cities and whom it seems impossible to awaken to any understanding of hygienic living or to teach how they must conduct themselves.

In private practice the intelligence of the patient is more usually sufficient, but even here the results are infinitely improved, other things being equal, when the mind is alert and keen.

If the patient is by nature enthusiastic it will be of great assistance in our efforts in his behalf, but enthusiasm is one of those qualities which is born in a man and which can not be cultivated.

SOCIAL AND FINANCIAL CONDITIONS

Aside from these mental qualities, we should note two conditions which have great effect on the patient's prospects of recovery, i. e., his social position and his finances.

In regard to the former, as is true all through life, the best lies at neither extreme of the social ladder. The very rich, fastidious patient of the upper ten, who has been spoilt all his life, who has always had his own way, who can not adapt himself to new conditions or be happy unless he can surround himself with all his accustomed luxuries, and who is unwilling, even when his life is at stake, to give up his favorite indulgences or bend his will to that of another, is handicapped in very much the same way, though from a different cause, as is the poor man who, for want of intelligence or means, can not get the proper conditions. The best results can be expected from those having more normal social ideals, cultivated and intelligent but not too much bitten by the society bee. These, neither handicapped by too great a fastidiousness on the one hand, nor on the other by a lack of those qualities which the lower classes miss, will prove our most satisfactory patients. In this class are apt to be professional and scientific men, college professors, and business men, etc., whose pockets, it is true, may not be as well filled as their heads, but who yet have sufficient means to secure proper conditions and whose minds are so trained as to enable them to avail themselves of all their opportunities.

A person's education and his hygienic enlightenment are apt to be, up to a certain level, fairly proportionate to his social station, hence those below a certain class make poor patients, owing to their inability to put into practice customs and habits alien to all their past training.

Many men of the intelligent artisan class, however, make excellent patients, for in this country that class contains many with minds used to independent thought. Though such patients are hampered by narrow means, they can yet obtain good results by making use of roofs, porches or back yards, as Pratt has demonstrated, and he has thus restored many such to a partial or complete working efficiency.

If, however, the disease in this class of patients is to be successfully combated a crusade against the hygienic condition of the average American workshop and the filthy spitting habits of the average American workman will have to be begun. At present thousands of this class yearly fall a prey either to the cupidity of short-sighted employers or to the careless habits of tuberculous fellow workmen.

Patients who are below a certain social level, who can neither secure the proper conditions however simple, nor appreciate them even if obtained, such as our slum dwellers and our criminal classes, must be handled, as already noted, by the community in charitable institutions, and should, if possible, never return to city life, where they at once gravitate back to their slums and their vices, and by the rapidity of their relapses scarcely justify the money paid for their care.

The financial condition of the patient is, of course, of the greatest importance, but in these material days this is too self-evident to need much notice. I would only say that patients must be able to spend on board, lodging and incidentals a minimum of $10 or $15 a week if they are to get proper if simple conditions, while for the artisan class $5.00 a week may possibly suffice. Below this point they become proper subjects for public help.

RELATION OF DOCTOR AND PATIENT

If the doctor is to manage his patient successfully, proper relations with him must be established in the beginning; therefore the first interview is unusually important. At this time the patient must be made to realize fully what he has to fight and the *mental* as well as the physical means with which he is to fight it, and must be shown the necessity of cultivating those qualities on which I have just dwelt. The absolute necessity of his willing and intelligent *cooperation* with us should be made clear, as well as the impossibility of getting satisfactory results unless he is willing to be obedient and faithful.

If he is rightly handled in this first interview, which should follow his examination, his confidence in the physician's *understanding* of his case and interest in his welfare will very largely guarantee his obedience. *In this first examination and talk the exact details of the life which he must lead should be laid out for him specifically and clearly, so that there can be no misunderstanding.*

Thereafter each time he is seen there should be a close and careful inquiry into his daily life, by means of his record-book and by independent questioning, when errors can be corrected, faithfulness encouraged, and the thorough carrying out of our orders seen to. Thus handled, very few will disobey, but if any do so systematically it is much better to give them up, for the doctor need not delude himself into supposing that a patient who three times disobeys specific orders will stop there, and he should not risk his reputation in the hands of a strong-headed, stupid or dishonest patient. If patients are followed up in this way there is no difficulty in keeping in close touch with them and controlling their lives most thoroughly, and guiding their *slow progress toward recovery will never be tedious*, but on the contrary will prove absorbingly interesting not only to the patient but to the doctor.

QUALITIES NEEDED IN THE PHYSICIAN

Not every doctor is so constituted as successfully to handle tuberculous patients. To do so demands certain qualities which are not so necessary to the doctor treating acute diseases, and he who may be pre-eminently successful in treating pneumonia, typhoid, measles, etc., may fail when he undertakes the management of so long drawn out a disease as pulmonary tuberculosis.

1. *Personality.*—All writers on the subject have dwelt on the importance in the physician in this sort of work of that indefinable quality which is called "personality." From the doctor will often have to come the will, the interest, the cheerfulness and the enthusiasm which his patients need. He must be able to charge them with these qualities as an electric current charges a storage battery, and it will need a strong personality and a large supply of vitality to enable him to fill this rôle.

2. *Will.*—For one who is called on to control others it need scarcely be noted that a strong will and forcefulness are desirable so as to compel obedience if need be; but the doctor's discipline should be as little in evidence as possible, and he should be able so to convince his charge of his interest in the latter's welfare, and so make plain to him the reasons for his orders that he will be obeyed not merely, or chiefly, because the patient fears to disobey, but rather from choice and trust.

3. *Teaching Ability.*—Since apparent recovery from tuberculosis demands a thoroughly trained and instructed patient who can be relied on thereafter to live wisely and avoid harmful influences, the doctor must have teaching ability, and not merely show his patient what he must do, but fix it in his memory by giving him reasons why he must do it, for no principle of pedagogy is better established than that the teaching which gives no reasons for the facts it imparts is lifeless and will soon be forgotten.

The doctor must be able to interest the patient in what he teaches him and hence must put it in an attractive form, for however beautiful naked truth may be, it is unquestionable that the clothing in which she is presented to us can greatly enhance or detract from her charms.

Further, if what the patient learns is to stay with him the rest of his life and keep him from imprudence in the future, it must impress him deeply; and we should never forget that he who recovers without having been taught how to retain his recovered health is pretty sure to relapse.

4. *Enthusiasm and Interest.*—If, by good fortune, the doctor is an enthusiast it will serve to lighten his labor, to turn what otherwise might be work into play, and to increase the interest which he can take in his cases. To be able to feel a lively interest in his patients, *not merely* as cases but as human beings, is a great assistance to the physician.

A small minority of the physician's charges are so unfortunately constituted that it is almost impossible for him to interest or be interested in them. These are a constant drag on the doctor and drain him of his vitality; for such he can usually do but little. The large majority, even if not unusually interesting at first sight, will prove so if studied closely enough, while a small but blessed minority are possessed of such a personality that they interest the physician from the first moment, and by their intelligent comprehension and cooperation make his treatment of them a pleasure throughout.

The importance of detailed work on the physician's part has been sufficiently dwelt on, and I can only repeat that vague, general directions are useless and that *the closest specification of our wishes is essential.*

Much more could be written on this question of the bearing of the qualities of the patient and his physician on the success or failure of the home treatment of pulmonary tuberculosis, but necessary limitations restrain me, and I can only hope that what I have said may *make plain the importance of the mental control of our* tuberculous patients.

In closing, let me urge on the general practitioner, to whom these cases first come, not to regard them as hopeless or to treat them routinely, or to relegate them to that category which he may, indeed, have to treat, but in whom there is no outlook or interest, but always to remember that, if only they are recognized as early as modern diagnostic methods permit and handled in the way I have suggested, the large majority will prove hopeful and interesting.

Let them be looked on and studied not merely as cases but as individuals with a personality that will repay study, with qualities which it is in our power to modify for their benefit, and who should appeal deeply to the profession as in their helplessness they come to us for help.

Thus regarded and thus handled, the treatment of our patients outside of closed sanatoria will reward us with unexpected results and remove from the minds of the profession the false, but painfully prevalent idea, inherited from the days when a really early diagnosis was impossible, of the incurability of pulmonary tuberculosis.

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SYSTEM IN RECORDING CASES *

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One can find in medical literature a great many sentences and paragraphs, an occasional page and a few isolated articles dealing with the subject of case records, but there is very little which offers to the student and practitioner a plan by which he may make records in an orderly and systematic way and at the same time preserve them for ready reference. There is no difference of opinion as to the value of such records. All seem to be agreed that it is impossible to arrive at a full and correct understanding of our cases without the systematic study incident to making records of the cases as they come before us from day to day.

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* Because of lack of space, this article here appears in abbreviated form. The complete article, including the full scheme of classification and details in regard to its application, may be obtained in the author's reprints, a copy of which will be sent by *The Journal on receipt of a two-cent stamp.*

It has long been the custom to keep records in large hospitals, and the greater part of the statistical basis for our discussions is from hospital records. It has recently been truly said by one of our American teachers, "There is no doubt that our present statistics are drawn too much from hospital work and that some valuable points might be developed were our private records as available as those concerning patients treated in the hospital."

It seems almost superfluous to enumerate the reasons for keeping case records in private practice as well as in hospital work. A comparison between private patients and hospital patients shows considerable difference in them in several important ways. Patients are not usually admitted to the hospital wards until they are seriously ill. A large proportion of such serious illness is due to the oversight or neglect of conditions which would have been easily cured if they had been observed early. For this reason the ward of the hospital presents some conditions which are rarely met in private practice and is a comparatively poor place to study initial symptoms of disease. This is better done in private practice. Disease is modified by the environment of the patient, and it is only by observing a large number of patients of similar environment that we can fully understand all the symptoms presented. To know a disease in its entirety we must have opportunity to make systematic study of it under varying conditions.

Those members of the profession who write understand fully the value of case records; but the importance of such records is not so plain to the great body of practitioners, who are inclined to say that they have no time for taking case records and no use for them if they are made. Case records are not kept solely for the purpose of teaching and writing, but should be kept for systematic and orderly study of the serious daily work of the general practitioner. There is an important work of observation and record-making remaining to be done by the physician in the country and in the small towns. Each environment develops its own modifications, which should be carefully studied and recorded. These practitioners are neglecting a duty which they owe to the sick as well as to their profession. The field of medicine has become too large and the plans of treatment too varied for any man to carry all in his head. Each one should have a plan by which he can easily review, for the purpose of comparison, all of the cases which he has had of a given kind. This is particularly true of the family practitioner, and yet he is the one who is least inclined to record his observations. The general practitioner sees such a variety of cases during the year that, in order to do his best in understanding each case, he should be able to review the similar ones which he has previously had. If railroad companies, insurance companies, lodges, associations and corporations find minute records of their members or employés so valuable, are not such records equally valuable to the practitioner of medicine who is devoting his whole life to that business?

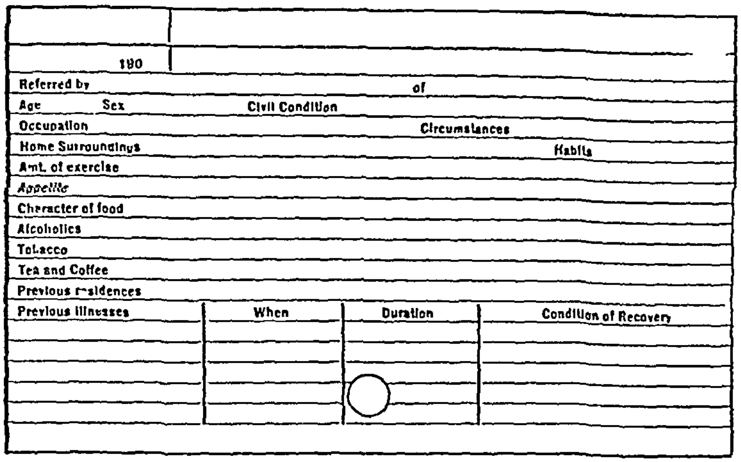
THE ESSENTIAL REQUIREMENTS OF A CASE-RECORD SYSTEM

There is a demand in the profession for some plan of case record which will be portable, brief, orderly and systematic. One reason why so few men keep records of their cases is that they have never been presented with a well-digested plan by which such records can be kept and made accessible for immediate reference. There are few physicians who have not at some time in their careers tried to keep records of their cases, but after a few months or years have abandoned record-keeping. Why is this true? Usually because the plan which they adopted was unpractical. Suppose a physician should keep records of cases until he has accumulated a large number. Perhaps he has made histories of 500 cases of one particular disease, extending through many years and contained, with hundreds of other cases, in books, drawers or boxes, according to the plan used. To make use of these cases, even for the preparation of a paper, he is confronted with the formidable task of going over his whole list in order to pick out those of the particular disease in which he is at that moment interested. Consequently many men who have recorded cases for years have no practical way in which to make daily use of their records. The object of this paper is to describe a method which seems to have in it the essentials of an orderly and systematic plan by which records made at the bedside or in the office are available for reference at any time without search through a large accumulation of records on other subjects than the one desired.

There are several essentials in making case records. Such records must be made by the doctor himself, and for this reason the plan adopted must be portable and convenient in order that he may always have with him the material on which the record is to be written. The record must be concise, and printed outlines may be used, although there is considerable difference of opinion as to the value of such outlines. With the average man records will be better taken and more orderly and more useful for future reference if outlines are used. Any plan to be successful must be practical and available for every-day use, at the bedside, at the office, at the hospital or on the street. In the plan presented the size of the card is not material, but I use a 3x5 card because it can be readily carried in any pocket and is not bulky. Only the number of cards necessary for one day need be carried. It is the size used in all libraries and was adopted by the American Library Association after long discussion. The only disadvantage which can be urged against this card is that it is too small for the amount of information which should be recorded and necessitates several cards and rewriting the patient's name on each. The first difficulty is obviated by multiplying the number of cards, which one will find a real convenience as it allows the various parts of the examination to be separated. This, combined with portability and convenience, overcomes the second objection. Only one size of card should be used. It is a great mistake to have one size for one purpose and another for other purposes. As one's work develops various combinations and readjustments will be found desirable and can readily be made if the cards are all of one size.

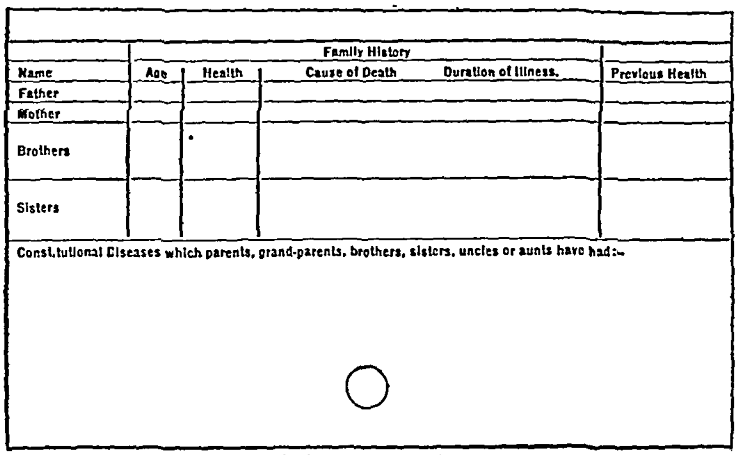
In the plan presented the business account is taken care of incidentally on the record card, but this is a matter of individual preference and the account can be kept entirely separate either in books or on other cards. This provision was adopted because it saved rewriting the patient's name and address. It has been the constant aim to reduce duplicating to the minimum and yet preserve the essentials. The plan adopted should eliminate the necessity for copying or making notes which are later to be written out in full. The original record should consist of orderly notes taken in a form ready for filing at the time of making the observation.

The one point on which many plans have failed is that of portability. In the enthusiasm of the moment the beginner will overlook or ignore this point and later find his work interrupted and finally ruined and abandoned because his card, sheet or book is not of such dimensions as to make it convenient for constant carrying in the pocket without being too bulky and cumbersome. Too much stress can not be laid on this point, which to the beginner often appears insignificant. The average man begins his record-taking when his time is not all occupied. In a few years he finds himself more and more busy and his time has a real market value which he must economize carefully. A busy day, a busy week and a busy month will go by with no records taken because the system pursued required more time than it was possible for him to give to it. Often a more portable and convenient plan would have saved the day. Many fail because they record too minutely in the beginning and are unable to keep it up. Records should deal with essentials and all unimportant details should be scrupulously avoided. Above all documents, a case record should be brief and to the point. It should be cleared of all that is superfluous in both words and matter, if it is to be continued year after year in a systematic and useful way.


190
Referred by of
Age Sex Civil Condition
Occupation Circumstances
Home Surroundings Habits
Amt. of exercise
Appetite
Character of food
Alcoholics
Tobacco
Tea and Coffee
Previous residences

Previous illnesses	When	Duration	Condition of Recovery

Fig. 1:--For Environment, habits, and previous illnesses.



	Family History				
Name	Age	Health	Cause of Death	Duration of Illness.	Previous Health
Father					
Mother					
Brothers					
Sisters					

Constitutional Diseases which parents, grand-parents, brothers, sisters, uncles or aunts have had:–

Fig. 2:--For Family history

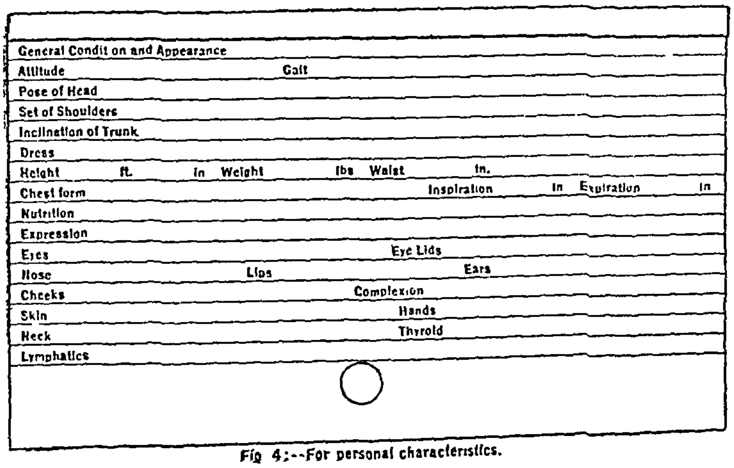

General Condition and Appearance
Attitude Gait
Pose of Head
Set of Shoulders
Inclination of Trunk
Dress
Height ft. in Weight lbs Waist in.
Chest form Inspiration in Expiration in
Nutrition
Expression
Eyes Eye Lids
Nose Lips Ears
Cheeks Complexion
Skin Hands
Neck Thyroid
Lymphatics

Fig 4:--For personal characteristics.

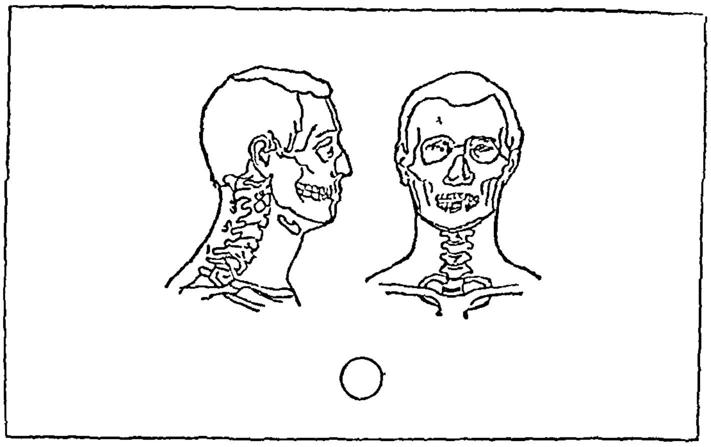


Fig. 7.

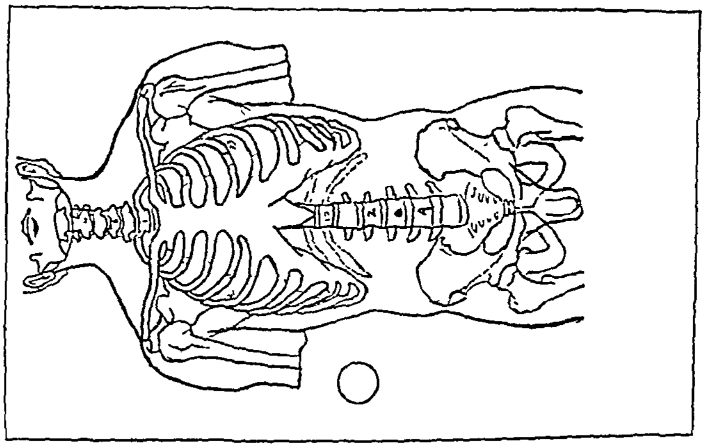


Fig 8.

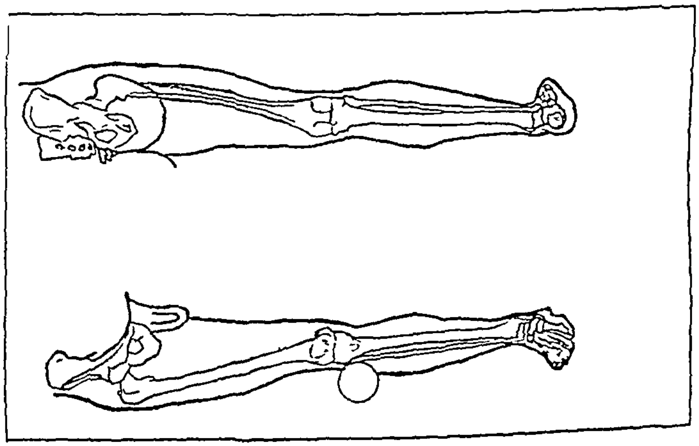
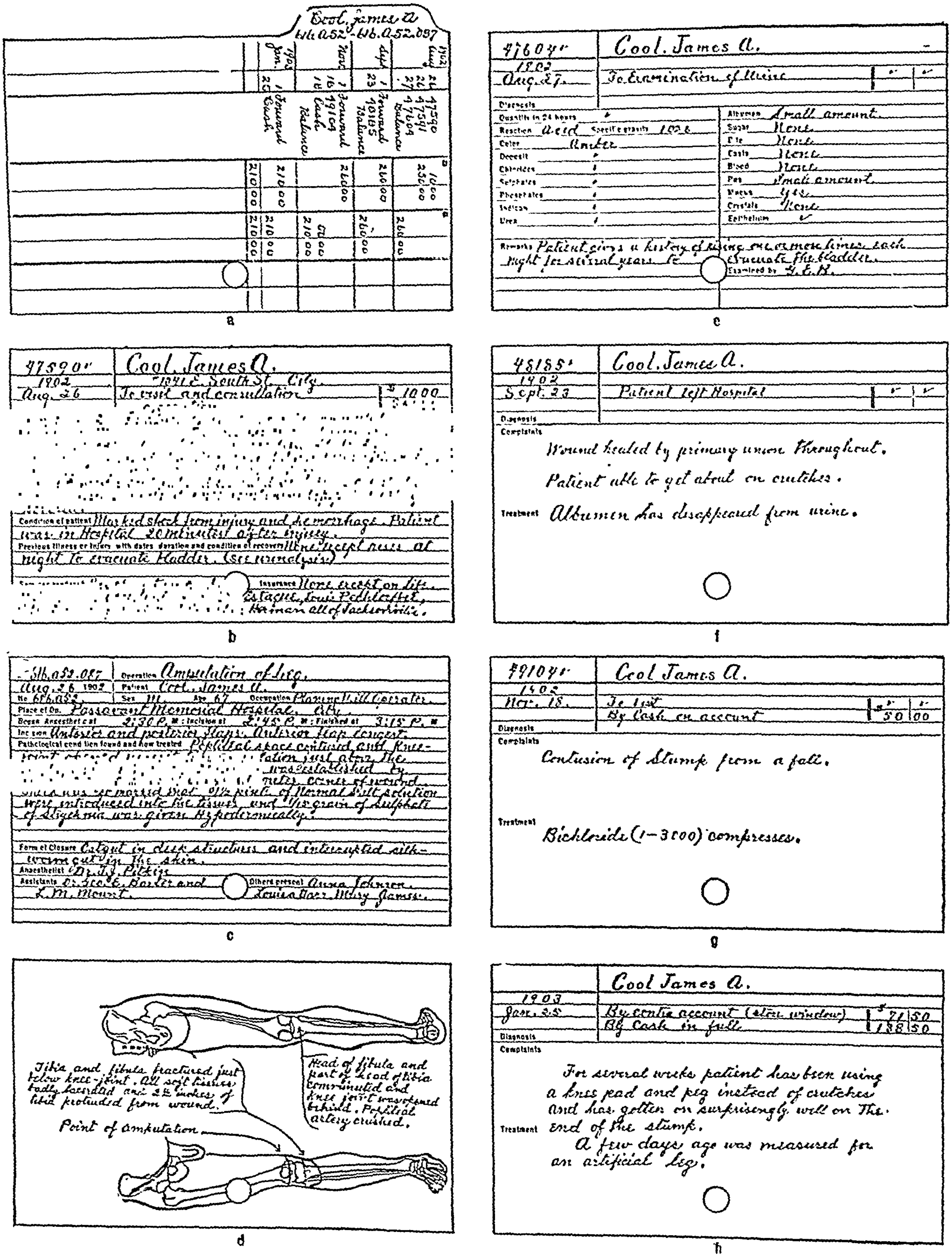


Fig. 9.

There are various objects to be attained by taking records, and the form and the extent will vary greatly with the purpose of the observer. This paper is written from the standpoint of the practical working physician who needs his records for two principal purposes: first, to improve his method and character of observation; second, to preserve these observations for ready reference.

Many succeed as to the first, but the great majority fail with the second. It is believed that the plan herein presented provides a convenient and concise method with full provision for elasticity and completeness. It comprises two distinct parts, an alphabetical file under the name of the patient, and a classified list of cases under the diagnosis or probable diagnosis.



Cool, James A
616.052-616.052.087

1902 Aug.	26	47590	10 00	
	26	47591	250 00	
	27	47604 Balance		260 00
Sept.	1	Forward	260 00	
	23	48185 Balance		260 00
Nov.	1	Forward	260 00	
	16	49104 Cash		50 00
	18	Balance		210 00
1903 Jan.	1	Forward	210 00	
	20	Cash		210 00
			210 00	210 00

a

47590 r Cool, James A.
1902 1941 E. South St. City.
Aug. 26 To visit and consultation $ 10 00

[illegible]

Condition of patient Marked shock from injury and hemorrhage. Patient was in Hospital 20 minutes after injury.

Previous illness or injury with dates, duration and condition of recovery None except rises at night to evacuate bladder. (See urinalysis)

[illegible] Insurance None except on life.
[illegible] Gustave, Louis Pelletier, Harman all of Jacksonville.

b

616.052.087 Operation Amputation of leg.
Aug. 26 1902 Patient Cool, James A.
No. 616.052 Sex M. Age 67 Occupation Planing mill operator.
Place of Op. Passavant Memorial Hospital. City.
Began Anesthetic at 2:30 P. M.; Incision at 2:45 P. M.; Finished at 3:15 P. M.
Incision Anterior and posterior flaps. Anterior flap longest.
Pathological condition found and how treated Popliteal space entered and knee-joint [illegible] ation just above the [illegible] was established by [illegible] retes corner of wound. [illegible] was so marked that 1½ pints of Normal Salt solution were introduced into the tissues and 1/30 grain of Sulphate of Strychnia was given Hypodermically.

Form of Closure Catgut in deep structures and interrupted silkworm gut in the skin.
Anesthetist Dr. J. J. Pitkin
Assistants Dr. Geo. E. Baxter and L. M. Mount. Others present Anna Johnson. Louisa Carr. Mary James.

c

Tibia and fibula fractured just below knee-joint. All soft tissues badly lacerated and 2½ inches of tibia protruded from wound.

Head of fibula and part of head of tibia comminuted and knee joint wide opened behind. Popliteal artery crushed.

Point of amputation

d

47604 r Cool. James A.
1902
Aug. 27. To Examination of Urine $ 2 50

Diagnosis
Quantity in 24 hours
Reaction Acid Specific gravity 1026
Color Amber
Deposit
Chlorides
Sulphates
Phosphates
Indican
Urea
Albumen Small amount.
Sugar None.
Pus None.
Casts None.
Blood None.
Pus Small amount.
Mucus Yes.
Crystals None.
Epithelium ✓

Remarks Patient gives a history of rising one or more times each night for several years to evacuate the bladder.
Examined by G. E. B.

e

48185 r Cool. James A.
1902
Sept. 23 Patient left Hospital

Diagnosis
Complaints
Wound healed by primary union throughout.
Patient able to get about on crutches.
Treatment Albumen has disappeared from urine.

f

49104 r Cool James A.
1902
Nov. 18. To visit $ 2 00
By Cash on account 50 00

Diagnosis
Complaints
Contusion of Stump from a fall.
Treatment
Bichloride (1–3000) compresses.

g

Cool James A.
1903
Jan. 25 By contra account (storm window) $ 71 50
By Cash in full 138 50

Diagnosis
Complaints
For several weeks patient has been using a knee pad and peg instead of crutches and has gotten on surprisingly well on the end of the stump.
Treatment A few days ago was measured for an artificial leg.

h

Fig. 10.—Cards illustrating the elements of a case record, with account.

The complete paper contains twelve illustrations of card forms and a completed record of a case, with full description of the various forms which I have used for a number of years, and which have been fairly satisfactory. The forms and the size of the card can be varied without interfering in the least with the system of records illustrated.

From day to day, in the office, at the hospital, or at the bedside, the record is written on cards such as those shown in Figures 1, 2 and 4, which are filed in chronological order under the patient's name.

For the convenience of those who are called in cases of accident and who subsequently make out reports to railroad companies, or accident insurance companies, the card shown in Figure 10 b provides for the data necessary for these purposes, although a blank card may be required for elaborating one or more points. I have used this form for a number of years and rarely find more cards necessary. In accident cases as well as cases of disease, diagrams as illustrated in Figures 7 to 9 are stamped on the back of the card, and the description on the diagram supplements the record as to the location and extent of the disease or injury. The diagrams illustrated, Figures 7 to 9, are made with rubber stamps. These stamps are from Keen's charts, are eight in number and provide for every part of the body. For those in special lines of work other outlines will be found desirable, as, for example, the pelvis, the abdominal contents, the larynx, etc. A few words describing a diagram will be clearer than a whole page of written description alone. They save time in recording and contribute greatly to accuracy. The rubber stamps will be found very convenient.

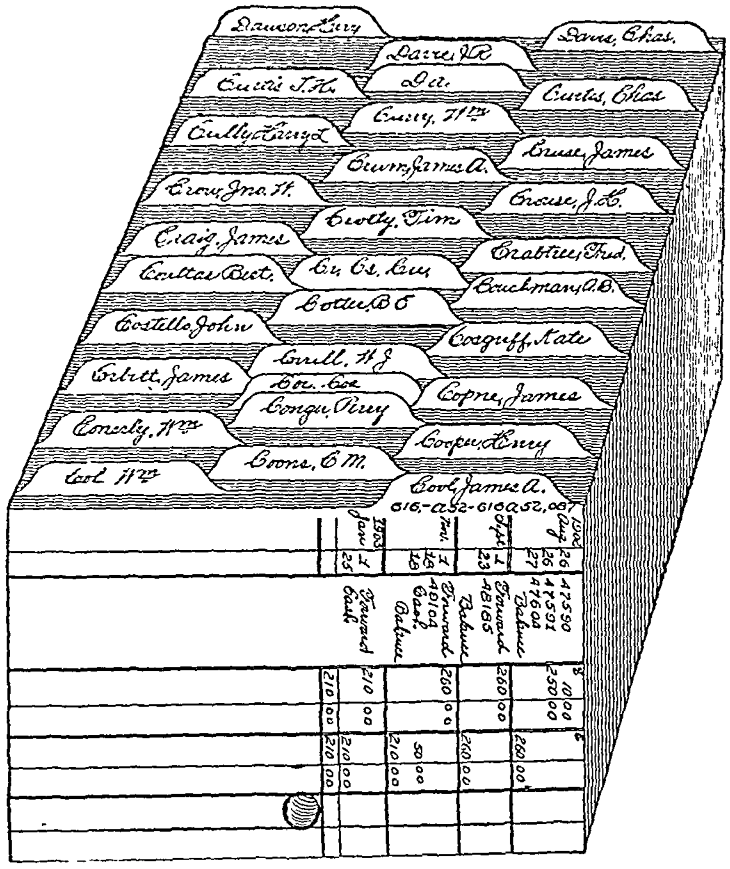


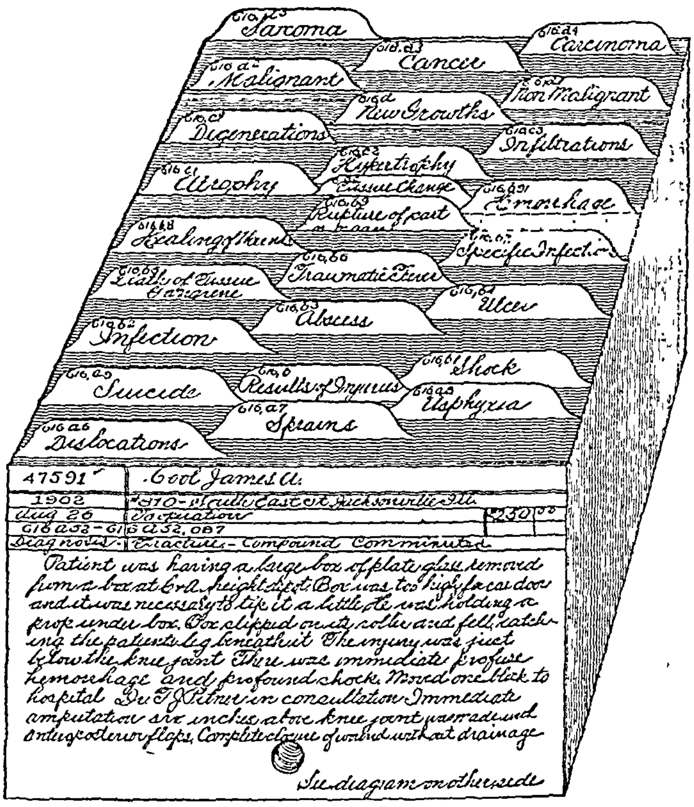
Fig. 11.—Records filed alphabetically by patients' names.

To illustrate the plan in practical use we will suppose a man injured in such a way as to necessitate the amputation of the leg. Figure 10 is a reproduction of the whole record in such a case, showing its history and result, with the day and ledger accounts. Figure 11 illustrates a section of a drawer containing a number of case histories. While the same case is shown in Figures 11 to 12 as in Figure 10. Figure 12 shows the narrative form, while Figure 10 shows the diagrammatic form. The selection of the form is entirely a matter of personal preference. In Figure 10 Card *d* as shown is on the back of Card *c*. Card *d* gives both anterior and posterior view of the leg and indicates the point of amputation as well as point and extent of injury. Card *c* is the urinalysis card. In explanation of the number at the upper left hand corner of the record card (See No. 47590, Fig. 10 b), which are also used as case numbers, it should be explained that I use a journal in which all entries appear in chronological order. This is not an essential part of the plan, although it is a great convenience to the bookkeeper. Cards *g* and *h* were made at dates widely apart and show how the account was finally closed and also contain notations as to the patient's condition at those dates.

This completes the record of the case and provides for the necessary details up to the point where most records stop.

For practical purposes of reference study, if we stop here, we will make little use of our case records. They are so much ancient history which is very difficult to consult. If a physician has accumulated 1,000 or 5,000 complete records of cases filed alphabetically, how will he study his cases of fracture, or amputation, or those cases of fracture which required amputation? The usual plan would be to remember the name of such patients and search through the records for them. If the records are in books there is the additional difficulty of consulting as many indexes as there are books.

To be available for immediate reference it is not sufficient to have records filed under the names of the patients; they must also be filed under the titles of the disease or injury. It is the chief object of this paper to present a practical working plan for such filing of our records.



47591 Cool James A.
1902 #310 South East St Jacksonville Ill
Aug 26 To operation 250 00
616 a52 - 616 a52, 087
Diagnosis. Fracture - Compound Comminuted

Patient was having a large box of plate glass removed from a box at C&A freight dept. Box was too high for car door and it was necessary to tip it a little. He was holding a prop under box. Box slipped on its roller and fell, catching the patients leg beneath it. The injury was just below the knee joint. There was immediate profuse hemorrhage and profound shock. Moved one block to hospital. Dr T J Pitner in consultation. Immediate amputation six inches above knee joint was made with anterior posterior flaps. Complete closure of wound without drainage

See diagram on other side

Fig. 12.—Records filed in classified index of diseases and injuries.

More than ten years ago I adopted Dewey's decimal classification, and since have used it for filing all case records. The plan has been to file the original record alphabetically under the name of the patient (Figures 10 and 11) and to have a copy of the record made which is filed in a classified index, as illustrated in Figure 12, which shows a section of a drawer of records filed under the disease or injury. A blue card is used for the disease and a salmon card for the operation.

The plan which I use of having the record made in duplicate is complete and satisfactory, but it entails much more labor than is necessary and, in fact, can be employed only by one who keeps an assistant for this work. A much simpler plan consists in posting the charges for services to the ledger card, as in Figure 11, and then filing the original cards under the diagnosis as in Figure 12. The classification numbers (616.a52, Fracture—Compound Comminuted and 616.a52.087, Operation for Compound Comminuted Fracture) on the original record (Figure 12) and on the ledger card (Figure 11) are cross-references and show at once where the original records are filed in the classified list of diseases, injuries and operations (Figure 12). The ledger card contains the class under which the case record was filed (Figure 11. No. 616.a52) and shows just where to look for the original record. (Figure 12.)

In practical use the original record cards are filed with the ledger card (Figure 11) and remain there until the case is completed, when it is transferred to the classified cases (Figure 12).

After the account is paid the ledger cards are transferred and become an alphabetical index by patients' names to the records.

By either plan the records are classified at once and all records of each disease or injury are found together, are kept up to date, and are immediately accessible for reference, and study and enable one to compare symptoms, methods, findings, treatments and results. Such a plan is of great practical value for both the clinician and the writer of articles and books by enabling them to consult the records of any case or group of cases without the necessity of a tiresome search.

The most important thing connected with this plan was the working out of a few modifications of the Dewey decimal classification. This classification consists of two parts: first, a division of all knowledge arranged in ten classes, each class being assigned one hundred numbers; second, a relative index. An outline of the classification is as follows:

000	General Works.
100	Philosophy.
200	Religion.
300	Sociology.
400	Philology.
500	Natural Science.
600	*Useful Arts.*
700	Fine Arts.
800	Literature.
900	History.

Each of these classes is subdivided into ten divisions, one of which, the subdivision of 600, Useful Arts, will illustrate the system:

610	Medicine.
620	Engineering.
630	Agriculture.
640	Domestic Economy.
650	Communication, Commerce.
660	Chemical Technology.
670	Manufacture.
680	Mechanic Trades.
690	Building.

Medicine is in the first division of the sixth class of knowledge and is number 610 in that class. Wherever 610 to 619 inclusive appear in the classification they indicate that the subjects are medical. Medicine (610) is separated into ten subdivisions, as follows:

610	General Works.
611	Anatomy.
612	Physiology.
613	Personal Hygiene.
614	Public Health.
615	Materia Medica and Therapeutics.
616	Pathology, Diseases and Injuries, Treatment.
617	Surgery.
618	Diseases of Women and Children.
619	Comparative Medicine, Veterinary.

In working out the subsections of each of the ten subdivisions of medicine, decimals are used.

The following comprise the general headings of the subsections as given in the complete paper and illustrate the plan of the classification:[1]

OUTLINE OF CLASSIFICATION OF MEDICINE

616	*PATHOLOGY, DISEASES AND INJURIES. TREATMENT.*
616.a	INJURIES
616.b	RESULTS OF INJURIES. SURGICAL PATHOLOGY
616.c	TISSUE CHANGES
616.d	NEW GROWTHS
616.e	FOREIGN BODIES
616.f	NERVE DISTURBANCES
616.g	SPECIAL INFECTIONS
616.h	FUNCTIONAL DISTURBANCES
616.k	ANOMALIES
616.08	TREATMENT
616.081	CLIMATIC
616.082	HYGIENIC
616.083	DIETETIC
616.084	MECHANICAL AND ELECTRICAL
616.085	DRUGS
616.086	SPECIFICS AND CURES
616.087	OPERATIVE
616.088	SERUM
616.089	PROPHYLACTIC
616.1	DISEASES OF THE CIRCULATORY SYSTEM
616.2	RESPIRATORY SYSTEM
616.3	DIGESTIVE SYSTEM
616.4	LYMPHATIC SYSTEM. DUCTLESS GLANDS. BREASTS
616.5	DISEASES OF THE SKIN
616.6	GENITOURINARY SYSTEM
616.7	ORGANS OF LOCOMOTION
616.8	NERVOUS SYSTEM
616.89	MENTAL DISEASES
616.9	GENERAL DISEASES
617.5	THE BODY BY REGIONS
617.7	DISEASES OF THE EYE
617.8	DISEASES OF THE EAR
618.1	DISEASES OF WOMEN
618.2	OBSTETRICS
618.9	DISEASES OF CHILDREN

In order that the classification may be completely useful, and especially that those not familiar with indexing may make practical use of this plan, a complete index to the classification in dictionary form is appended in the complete paper. The following illustration is taken from this index:

INDEX TO CLASSIFICATION.

Abdomen	617.55
Abdominal hernia	617.55.b93
Abortion	618.39
Abrasions	616.a3
Abscess	616.b3
Absence of parts, transposition or displacement	616.k8
Accessory cavities of the nose	616.212
Accessory nerve, spinal portion	616.828
Actinomycosis	616.974
Acute arthritis	616.72.b21
Ague	616.937
Anemia	616.15.gl
Aneurism	616.13.c75
Angioneurosis	616.13.c78
Animal parasites (general diseases)	616.961
Animal parasites in skin diseases	616.562
Ankle joints	616.7283
Anomalies	616.k
Anthrax	616.971
Antrum of Highmore	616.213
Anus	616.351
Aorta	616.131
Aortic valve	616.121.g22
Appendages of the skin	616.55
Appendix	616.3452
Arachnoid	616.813
Arteries	616.13
Arteries inflammations of	616.13.b2
Arthritis	616.72.b2
Arthritis, acute	616.72.b21
Arthritis, chronic	616.72.b22
Arthritis, rheumatoid	616.72.b724
Arteriosclerosis	616.13.c78
Ascending colon	616.3471
Asphyxia	616.a8
Atresia, Dilatation, Stricture	616.b8
Atrophies of skin	616.54
Atrophy	616.c1
Auditory canal	617.862
Basal ganglia	616.833
Base of brain (subcortical white matter)	616.832
Beriberi	616.918
Bile passages	616.362
Bladder	616.62
Exstrophy of	616.62.k2
Functional disorders	616.62.h
Sacculated	616.62.g6
Blood, diseases of	616.15
Structural diseases of	616.15.g5
Body by regions	617.5
Bones (except spine)	616.71
Face	616.713
Fragilitas ossium	616.71.g6
Inflammation	616.71.b2
Larynx	616.714
Lower extremity	616.719

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[1] Surgery and surgical treatment are included under the region of the disease.

Clinical Notes

CLINICAL OBSERVATIONS ON BLOOD STAINS

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AND
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The object of this paper is to call attention to some of the chemistry of the methyl alcohol stains in common use for the staining of blood, and to point out the practical value of the study to the general practitioner who makes his own blood examinations.

Since Wright's modification is that in most common use, the discussion will be confined to it in the first part of the paper, though the remarks apply equally well to the Hastings modification and to the Harlow stain, which will be taken up in some detail later.

None of the polychrome methylene blue and eosin mixtures are stable. They are mixtures of polychrome methylene blue, which is both neutrophilic and basophilic, and of eosin, an oxyphilic stain. The specificity of the stain depends alone on the balanced combination of these two components, and this, in turn, depends on the reaction. Methyl alcohol is used for the solvent in all of these staining fluids, this chiefly for its fixing properties.

Methyl alcohol is of itself unstable. In the presence of but little light or air, it is in part changed to formaldehyd, and this, with a bit of moisture is converted into formic acid. It makes some difference what methyl alcohol one uses. The "absolute methyl alcohol, acetone-free," is not so good for making up a staining solution as is the "reagent methyl alcohol" to be had from Merck. Absolute methyl alcohol readily changes in part to formaldehyd and formic acid even in the absence of any amount of light, air or moisture; whereas the "reagent" alcohol is far more stable.

It has been the ordinary experience of every one who has had much blood work to do, that an old stain always stains too red; this, for the reason pointed out above, that the old staining mixture becomes acid. In the presence of a trace of acid the oxyphilic component of the stain is accentuated, while the avidity of the methylene blue is depressed and *vice versa*. Again, different bloods react differently to the same staining fluid under the very same technic. A normal blood, for instance, will stain very well with a certain staining solution, while a smear from pernicious anemia will not stain at all well, or it may be impossible to demonstrate the granules of the myelocytes in a case of myelogenous leukemia.

In Professor Dock's clinic at the University of Michigan, in 1906, the first work, to my knowledge, on the reaction and titration of these stains was done. At that time there were six cases of pernicious anemia in the clinic and three of myelogenous leukemia. Not one of these bloods would stain satisfactorily with the staining fluid (Wright's) that we used with most satisfactory results on fairly normal bloods. As a result of this experience, it was determined to discover, if possible, the cause. Reasoning from the chemistry of methyl alcohol, it was decided to alter the reaction of the stain and see if in that way good stains might not be had.

A little potassium hydrate by alcohol was dissolved in a few cubic centimeters of methyl alcohol in a test-tube, and to another few cubic centimeters of methyl alcohol a few drops of glacial acetic acid were added. Note that in this procedure no water was introduced. If the staining fluid to be altered did not stain the basophilic elements and the neutrophilic granules of the polymorphonuclear leucocytes well, a few drops of the potassium hydrate solution in alcohol was added to the staining solution. The bottle was then shaken, and, after thorough mixing, a blood smear was stained. If the stained smear was not satisfactory, for instance, if the neutrophilic granules did not come up well, a few more drops were added, and the procedure repeated until the neutrophilic granules did come up as desired. If too much alkali were added to the staining fluid, as evidenced by poorly defined oxyphilic elements and undue accentuation of the blue, a little of the acid in alcohol was added, and the whole titrated back as described above. A stain may be considered satisfactory if the neutrophilic granules of the polymorphonuclear leucocytes stain well. In a myelogenous leukemia smear, the best criterion is the neutrophilic myelocyte. The granules must be clearly defined and of good color. By this procedure good stains may always be had from any staining fluid on any blood.

The staining fluid was then put into a clean dark bottle and a good cork fitted tightly. A dark bottle with a good cork is in every way to be preferred to a bottle with a glass stopper, even though the glass be amber. A staining fluid will keep in perfect condition indefinitely if kept in this manner, unless it is allowed to get low in the bottle, so that a large amount of air is admitted. In the latter case, after a time, the same changes will be noted that are to be found in all old staining fluids.

After these experiments were completed, we made up some of the Wright powder. Three batches of the powder were made up, and in only one of them were the directions carefully followed. In one of the batches 15 per cent. more eosin was used than the directions called for, and in the other 20 per cent. more of the methylene blue was used. Solutions of the two powders containing excesses of one of the components were made, and the staining solution titrated as described. We obtained perfect stains from each of these powders—in fact, better stains than could be had from the powder that was accurately made, before it too was titrated.

Staining solutions were then bought from Bausch and Lomb, Eberbach & Company, and from the Leitz Chicago office. None of these staining fluids gave satisfactory stains before manipulation. By titrating we obtained good stains from each.

One batch of Hastings' stain was imperfectly made up, and from this good stains were had after manipulation.

In the fall of 1907 work was started on the Harlow stain. This stain is of two parts, one a 1 per cent. solution of eosin, water soluble, in methyl alcohol, and the other a 1 per cent. solution of ordinary methylene blue, or of Ehrlich's rectified, in methyl alcohol. The smear is stained first for one minute with the eosin mixture, and the stain poured or thrown off. Then the methylene blue solution is put on for one minute, after which it is washed in distilled water, dried and mounted as usual. In the Harlow stain, the methylene blue is polychromed on the smear by the little eosin remaining on the glass after most of it has been poured or thrown off. The stained smear has the same general appearance as the Wright stain, except that the reds have somewhat of a blue tint. An old Harlow stain incurs the same difficulties that does an old Wright stain: it does not stain well the nuclei and the neutrophilic granules. In titrating this stain, both solutions were altered. Changing the reaction of the eosin solution had no effect on the resulting stain. Changing the reaction of the methylene blue solution gave all the good results that were obtained from the manipulation of the Wright stain. The Harlow stain can be as easily and as satisfactorily altered as can the Wright stain to suit any individual blood. The Harlow stain is in some ways to be preferred to the others, in that it stains the granules more decidedly. There is with it never a question as to the nature of a granule. On the other hand, in working with a blood in which there is very slight polychromatophilia it is not so satisfactory.

SUMMARY

1. The changes found in old methylene blue and eosin staining mixtures are due to a change in the reaction of the methyl alcohol.
2. A staining fluid which is too acid will stain too red. The red corpuscles and the granules of the eosinophilic cells stain well enough, but the neutrophilic granules of the polymorphonuclear leucocytes and the nuclei do not stain well.
3. A staining fluid which is too alakaline will stain blue. The nuclear elements stain well, and in a certain number of cases the neutrophilic granules stain fairly well, but the red blood corpuscles do not color properly.
4. All staining fluids made up with methyl alcohol should be kept in clean dark bottles and tightly corked. If the bottle has been thoroughly steamed out and dried before the staining fluid is put into it, much of the difficulty will be avoided. A bottle that has been well coated with a layer of asphaltum paint is best. A good cork is to be preferred to a glass stopper.
5. By titrating with potassium hydrate, or glacial acetic acid, in methyl alcohol, the stain can at any time be brought up to the desired standard or reaction for any blood.
6. The procedure is equally efficacious with Wright's, Hastings' or Harlow's stain.
7. In working the Harlow stain, change the reaction only of the methylene blue.
8. Judge the stained smear, using the neutrophilic granules of the polymorphonuclear leucocytes as your criterion. If these do not stain well, something is wrong with the staining solution or the technic.
9. Use a methyl alcohol of known purity.

LYMPHATIC LEUKEMIA

A CASE TREATED BY THE STENGEL-PANCOAST METHOD

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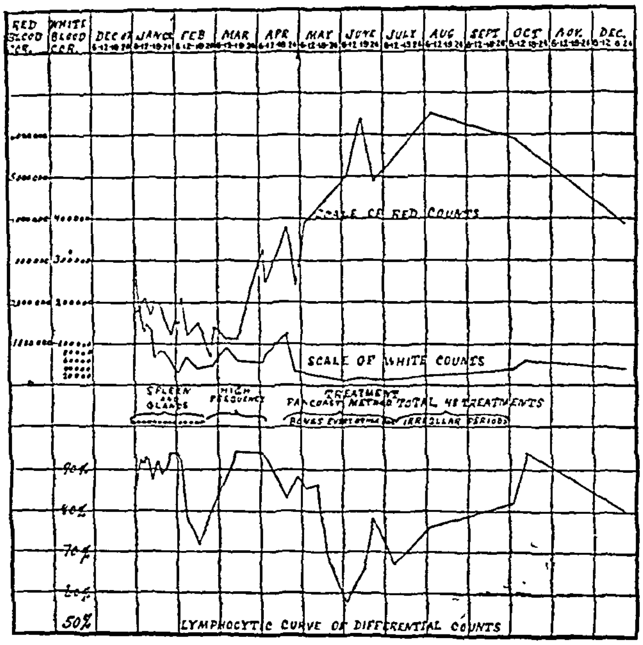
The report of a case of chronic lymphatic leukemia treated by the Roentgen method of Pancoast seems worthy of record, despite the already long list of detailed reports of cases treated by the older technic. Results of Roentgen treatment in leukemia by the older methods have not been satisfactory, as the small percentage of permanent cures testify. The striking initial drop in the leucocyte count and the decrease in size of the spleen and lymph glands has unfortunately not been permanent and the brilliancy of this early symptomatic cure has been replaced by subsequent relapse and failure. Analysis of completed case records[1] shows a fatal result in 85 to 90 per cent.

Manifestly such final result is neither satisfactory nor encouraging, and here and there voices have been raised against the Roentgen ray as having failed of its promised benefit. But, as Stengel and Pancoast point out, an agent capable of such powerful initial changes must have inherent virtues, and they prefer to believe that the hitherto unsatisfactory results were due to irrational and improper methods rather than to deficiencies in *x*-ray possibilities. Assuming the pathologic lesions of leukemia (regardless of type) to be primarily in the bone marrow, the effect of exposing the lymphoid tissue by the older methods was as follows: Lymphocytes or myelocytes were destroyed, liberating at the same time leucolytic substances, which in turn affected the bone marrow. The result desired was, therefore, brought about by an indirect and circuitous method, instead of by a direct attack on the essential lesion. The spleen was avoided, at least until the patient was improved.



Five cases are reported by Pancoast and Stengel, all of the splenomedullary type, but details are not given. In a personal communication to one of us, Pancoast states that he has also used the method in lymphatic cases. Pancoast and Stengel claim for this method equal or superior final results and the avoidance of toxemia.

Briefly, the new method is to map out the bone marrow of the body into about eight districts or regions and to expose these consecutively and in rotation, repeating until desired results are attained. Certainly nothing seems more rational than attacking a pathologic process direct when this is possible, as it is here. Judgment of the method will, of course, be delayed until sufficient final results can be analyzed, but the unsatisfactory nature of treatment by the older method contains nothing to recommend its continued use when the probability of a better is offered.

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[1] Stengel, Alfred, and Pancoast, Henry K.: Treatment of Leukemia by the X-ray, The Journal A. M. A., April 25, 1908, L, 1317.

CASE REPORT

Patient.—Male, aged 47, watchman and porter; came under observation in December, 1907; referred by Dr. J. H. Jacobson. The father and mother were dead of unknown causes. The remaining family history presented nothing (in so far as the patient was aware) of interest in connection with the case.

History.—The patient was well as a child and enjoyed fair health during the greater part of his life. An attack of so-called "influenza" at 20 was passed through without complications or sequelæ. Six years ago (the patient being then 41) a slight left-sided facial paralysis occurred, which entirely disappeared at the end of two weeks. Venereal infection was denied. The patient was a moderate user of alcohol and tobacco.

Present Illness.—It is difficult, if not impossible, for a definite onset to be described. The "swelling" of various parts of the body dates back three or four months from the time of first observation, but prior to this there were cough, expectoration and weakness. In December, 1907, there were pronounced weakness, dizzy attacks, hoarseness, stiffness in legs, dyspnea, constipation and nervousness.

TABLE OF BLOOD FINDINGS

Date.	Reds.	Whites.	Hb.	Lymphocytes. Per cent	Poly. Neutrop. Per Cent.	Large Mononuclear. Per Cent.	Eosinophile.	Mast.	Nucleated Reds
Dec. 30, 1907........	1,688,000	342,000	25	85 5	10	2 5	1 0	1 0	1
Jan. 3, 1908.........	1,840,000	195,200	24	92 3	7 0	0 3	0 3	0 0	
Jan. 5, 1908.........	2,072,000	128,800	30	91.5	7.0	1 0	0 5	0 0	
Jan. 8, 1908.........	2,120,000	145,600	25	93 0	5 0	1 0	0 3	0 6	
Jan. 12, 1908........	1,720,000	130,000	25	87 5	9.5	2 0	0 5	0 5	
Jan. 15, 1908........	2,000,000	68,000	25	92 0	5.0	3 0	0 0	0 0	
Jan. 19, 1908........	2,008,000	82,400	24	89 0	7.5	3 0	0 0	0 5	2
Jan. 22, 1908........	1,620,000	79,200	22	90.5	7 5	1 0	0 8	0 2	
Jan. 26, 1908...	1,224,000	60,800	..	94 0	2 0	3 0	1.0	0 0	
Jan 29, 1908........	1,552,000	43,600	20						
Feb. 2, 1908.........	1,496,000	32,000	20	94 0	4 0	1 0	1 0	0 0	
Feb 4, 1908.........	2,164,000	39,600	25	90 0	2 5	4 5	2 0	1 0	2
Feb 8, 1908.........	1,200,000	66,000	20	78 0	14 5	6 0	1.0	0 5	
Feb 16, 1908........	1,512,000	41,200	..	72 0	19 5	7.0	1.0	0 5	
Feb 25, 1908........	736,000	.....	14						
Feb 27, 1908........	1,392,000	46,800							
March 6, 1908.......	1,080,000	99,200							
March 14, 1908......	1,080,000	59,200	..	94 5	1 0	4 0	1 0	0 0	1
April 3, 1908........	3,280,000	58,400	40	94 0	4 5	1 0	0 5	0 0	
April 5, 1908........	2,536,000	73,600							
April 20, 1908.......	3,840,000	26,400	..	83 0	14 0	3 0	0 0	0 0	
April 27, 1908.......	2,376,000	32,000	..	88 0	8 0	2 5	1 5	0 0	
May 3, 1908.........	3,920,000	36,800	55	85 5	12 0	2 0	0 5	0 0	2
May 11, 1908........	....	.....	..	86 5	12 5	1 0	0 0	0 0	
May 18, 1908........	....	.....	..	70 0	24 0	5 0	0 0	1 0	
May 25, 1908........	....	.....	..	64 0	30 0	3 0	2 0	1 0	
June 3, 1908........	5,000,000	12,800	95	57 0	39 0	4 0	0 0	0 0	1
June 14, 1908.......	5,536,000	19,000	..	66 0	30 0	4 0	0 0	0 0	
June 22, 1908... ...	6,464,000	16,000	..	78 0	20 0	2 0	0 0	0 0	
July 7, 1908	4,928,000	15,400	..	67.2	29 0	3 8	0 0	0 0	
Aug. 4, 1908	6,526,000	25,800	96	76 0	19 5	0 0	4 0	0 5	1
Oct. 3, 1908	5,952,000	41,600	..	82 0	13 0	4 5	0 0	0 0	1
Oct. 12, 1908.... . .	5,728,000	61,200	..	94 0	3 0	1 0	0 0	0 0	
Nov. 22, 1908	3,936,000	40,200	..	80 6	15 6	3 3	0 0	0 3	

Examination.—The patient was short and stocky, 5 feet 5 inches in height, weight 155 pounds, not emaciated, skin and mucous membranes pale, panniculus moderate, musculature flabby, no skin lesions. Bony structure symmetrical. General glandular enlargement in all parts of body, especially marked in cervical region, in which there was a massive glandular "collar," nearly obliterating the neck depression between the jaw and the thorax. Numerous lymphomatous nodules on abdomen and back. Tonsils enlarged and lymphoid tissue of tongue and pharyngeal ring markedly increased. Muscles of calves and thighs sensitive to pressure. Sternum sensitive Slight edema of ankles. Pupils slightly dilated, margins smooth, equal on both sides, *reacting* to light and in accommodation

Thorax: Large, symmetrical, breathing slightly dyspneic. Dulness over right front just below clavicle, corresponding to a glandular mass at this point *above and below* the clavicle Breath sounds, exaggerated vesicular over this area with an occasional dry, rubbing like sound. Few moist râles scattered over both lungs.

Heart: Apex beat moderately strong in the fifth interspace in mammary line, movable, no thrill, dulness slightly increased to left Right edge of cardiac dulness merged with substernal dulness, probably due to enlarged mediastinal glands. Distinct and moderately loud systolic murmur at apex transmitted to left as far as anterior axillary line, apical first and second sounds moderately strong. Both second sounds at base weak with slight relative increase of pulmonic. Pulse equal on both sides, weak, regular, systolic blood pressure 105.

Abdomen: Large, slightly tender, especially over right *hypochondrium.* Liver easily palpable two inches below costal margin and very sensitive. Spleen enlarged downward to umbilicus, upward to seventh interspace. Surface smooth, somewhat tender, no ascites.

Tibiæ: Not tender. Patellar reflexes present, but weak.

Sputum: Profuse, no tubercle bacilli or elastic tissue fibers.

Urine: Twenty-four hour amount varied from 1,200 c.c. to 3,200 c.c. Average specific gravity 1020, acid, clear. Serum-albumin persistently present. Albumoses absent No glucose. Slight aldehyd reaction. Cammidge's pancreatic reaction negative. Indican and diazo reaction negative. Sediment shows no casts, few leucocytes and a moderate amount of epithelium.

Blood: Pale, flow poor, hemoglobin 25 per cent. (Fleischl), red cells 1,688,000, white cells 342,000.

Treatment.—Roentgen ray exposures were instituted, Dec. 31, 1907, by the older methods, viz., treatment limited to the spleen and glands. Owing to the marked anemia, especial care was taken to avoid, as far as possible, any toxic effects. Treatments were given with tubes of Walter, 6 penetration, anode distance from surface twelve inches and a current strength of 1 milliampere through the tube. During this first series treatments were limited to ten minutes and were given every third or fourth day. From Dec. 31, 1907, until Feb 20, 1908, fourteen treatments were given. The white count in this period dropped from 342,000 to 42,000, and the red count decreased to about 700,000 with a hemoglobin percentage of 14. The patient at this time was in an extremely critical condition, dyspneic and weak. There was at this time no increase in the albuminuria or other definite signs of a *Roentgen ray* intoxication, but the treatments were stopped and with a hope of improving the general condition, high frequency treatments instituted. The apparatus employed consisted of a *high potential* condenser of rather large capacity discharging across a spark gap in series with a solenoid. Shunt wires were taken from the solenoid to the couch and patient, as with the ordinary D'Arsonval apparatus. The large capacity of the condenser lowered the frequency, while at the same time the length of the spark was reduced, enabling the patient to be placed much nearer the condenser plate, i. e., the dielectric thickness was greatly decreased, thus greatly increasing the condenser effect and allowing stronger currents to be utilized Fifteen-minute treatments were given daily until March 6, and then at irregular intervals until April, at which time the patient's general condition was very much improved During this period of high frequency treatment the patient was in a hospital under careful observation, and it hardly seemed probable to us that the improvement was spontaneous, following the discontinuance of the x-ray and removal of a possible intoxicating influence. We are unwilling, however, to ascribe it definitely to the high-frequency current, yet the intense influence on metabolism observed in treating anemias by the high-frequency current leads us to the belief that it was not entirely without value. On April 21, 1908, Roentgen treatment was again instituted by the Pancoast method, according to the technic described by him.

Blood Examination.—The blood findings are here tabulated and charted. All blood examinations were made by one of us, so the personal factor is uniform throughout. Wright's stain was used. In all differential counts, only normal cells were considered. All degeneration forms were excluded. In December, 1907, before the institution of the x-ray treatments, the percentage of degenerated leucocytes was 29.6 per cent., while in July, 1908, the percentage was 58.6 per cent. The transitional forms of Ehrlich were counted as large mononuclears. The beginning of x-ray treatment was followed by the usual drop in the white-cell count, and at no time did they return to the original high number. The lowest point, 12,000, was reached in June, but ordinarily the white count varied from 20,000 to 40,000. The red cells increased in number and in hemoglobin from the beginning of the high-frequency treatments following the critical condition of the patient described above. Attention was especially directed toward the behavior of the lymphocytes in the differential counts. The original percentage was about 90. During the larger part of the bone treatment it was, generally speaking, below this, reaching its lowest point (57 per cent.) in June. It again reached 94 per cent. in October, however. Thus, the leukemic picture has not been lost.

Urine.—This constantly showed nucleo-albumin during the first months of treatment, but not previously. In December, 1907, when the patient first came under observation, the uric acid amounted to 2.37 gm. for the total twenty-four hours urine. On Jan. 15, 1908, following the decided drop in leucocyte count, the amount was 4.09 gm. for the twenty-four hour amount. In October, 1908, the amount was 2.16 gm.

Course of Disease.—The general condition improved remarkably after the beginning of the Pancoast method. The splenic tumor practically disappeared, likewise the glandular enlargement; strength returned, and the patient felt quite well. That is, he was symptomatically cured, but with a persisting lymphocytosis. Therefore, he was not cured, and, unfortunately, the patient's removal to another state has prevented our further observation. We believe that the treatment of the bones by this newer method has undoubtedly been of great value, and, with its originators, recommend its further trial in place of the older exposures to spleen and lymph glands.

237 Michigan Street.

A NEW PHYSICAL SIGN FOUND IN THE PRESENCE OF INFLAMMATORY CONDITIONS OF THE LUNGS AND PLEURA

A PRELIMINARY NOTE

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This sign, which so far as I am able to learn, has not been described hitherto, except in case of the pleura, consists of a rigidity of the muscles of the chest wall, particularly of the intercostals. By making gentle pressure with the tips of the fingers over the intercostal spaces the experienced touch will detect a resistance on the part of the muscles that overlie the inflamed parts which is like that noted in the muscles of the right lower quadrant of the abdomen in appendicitis, in the right hypochondrium in the hepatic colic or the general rigidity of the abdominal muscles when general peritonitis is present.

Special Article

IMPRESSIONS OF PARIS

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1. TEACHERS AND STUDENTS

(Continued from page 703)

THE STUDENTS

As elsewhere the Paris medical students are in three groups—good, indifferent and bad. A casual visitor to the laboratory and the hospital gets only a general impression, and that given to me was of a very industrious hard-working set of men. From the start the student knows that success depends on his brains, or on a facility to use them in a certain way. One word is stamped on his consciousness—*concours*, the public examination for positions of all sorts so characteristic, as I have said, of the French system. He is early made to realize that every single step in his career until he reaches an *agrégé* professorship depends on how he conducts himself at the *concours*. This must have a very steadying effect on a young fellow.

One advantage the French medical student has over all others. To the hospitals of Great Britain and Germany the medical student is admitted as a right; in the United States he is too often only tolerated and not always admitted to the wards! In Paris the hospital is his home. The first thing the young P. C. N. does after passing the examinations which entitle him to study medicine is to visit a hospital. Attendance during the first year is not compulsory, but the practice is universal. The hospital is everything; the medical school is—well, quite a secondary consideration. No matter what may be the leanings of the young man, whether toward science or toward practice from the start, he has his eye on one thing—the interneship—through which portal for more than one hundred years all the famous men of the profession of France have passed. *The* great prize of the student's life, the *internat*, is the pride of the student body, and, indeed, past and present, it is the pride of the profession of the country, since it embraces its select and elect.

To us, with our new graded courses and rigid system, to demand hospital work of first and second-year students seems topsy-turvy and antiquated. There is a movement against the practice, I hear, in France, but not a strong one, and in the new proposals of an additional year to the curriculum I see that hospital attendance is to go through the entire five-years' course. It is interesting to hear what may be said in its favor. Bouchard, President of the Institute of France, controlling member of the Superior Council of Education, Professor of General Pathology in the Faculty and its dominant member, wrote last year a brochure, *Questions relatives à la réforme des études médicales.* Listen to this, you hidebound advocates of graded courses: "That which the student should learn in his first hour is medicine. . . . From the moment of his matriculation the student should seek to comprehend the thoughts, the occupations, the duties and the responsibilities of a physician. He should accustom himself without delay to think and to feel medically. When he enters the medical school his place is at the hospital as much as at the amphitheater or in the laboratory. *It is at the hospital particularly where he will get his moral and intellectual education, and where his senses will be sharpened by observation.* His destiny is to consecrate himself to the sick man, and to this sick man he should become attached at the very outset of his student life. Nor need it hinder him in the pursuit of other studies. But, whatever you do, keep him not away for two years from the hospital, and do not let him pass too abruptly from the rabbit and the guinea-pig to man."

How much truth there is in this! And how words of this sort will go to the heart of my friend John Chiene of Edinburgh, and to many, indeed, who feel strongly with Professor

Bouchard that the medical student cannot begin his practical life too soon. Is there not an unfortunate cleavage between the scientific and the practical (i. e., hospital) side of the student life, and has there not arisen in some quarters an antagonism between the science and the art? Now I must own to just a wee qualm when I see these happy first-year students flocking to the hospital wards. Have we been wrong, after all, in this persistent advocacy of a sharp division between the two great groups of studies? But hear Bouchard out.

Three hours in the morning at the hospital, three hours in the afternoon in the dissecting room and two hours for special lectures on embryology or histology comprise his program for the first year. The student's first hour in the hospital would be with an assistant who would begin to teach him a few practical points in dealing with patients, and afterward he could follow the chief and pick up what he could.

Much as I love hospital work and much as I believe in the life of the student in the hospital, I do not think that, with our present congested curriculum, it is an advantage to begin clinical work at once. It may be good for the medical student morally, but I am sure it is bad for him intellectually, and he gleans a heterogeneous accumulation of isolated half-understood experiences, instead of an orderly sequence, in which the acquired knowledge of the laboratories is brought to bear on the problems of disease. And the conditions have changed so much. The old apprentice system had many advantages and we lost a very precious article when that was abandoned; so, too, this plan of turning first and second-year students into the wards and the clinical amphitheater is good, very good; but does it foster an orderly intellectual development so important in the education of a modern physician? I believe not. A more excellent way is in a due sequence of studies which reserves the complicated problems of disease until after the scientific branches have been mastered. Whatever one may think of the system, the fact remains that the student here begins his medical career with the hospital attendance. Indeed, in the preliminary year the men have an eye on the hospital. One of them said in my hearing, "Oh, our Professor at the Jardin des Plantes did not come this morning. I went over to the Pitié [a hospital near by] to see what was going on."

Officially the medical student in the hospital is known as a *stagiaire* (from *stage*, the word used to designate the hospital period) and he serves as such in his second and third years. To the official clinic of the faculty and to certain services of the hospitals the *stagiaires* are assigned in groups of twenty. They are expected to be on attendance at 9 a. m. and they make the visit with the chief and do part of the work of clinical clerks and surgical dressers, a certain number of beds being assigned to each. The students have a choice of service, according to the standing in the examination at the end of the first year. The roll is called, and they seemed to be looked after pretty sharply.

The plan of bedside teaching varies somewhat with different men—on the whole, it is not quite so Socratic or so systematic as in the English and Scotch schools. The new cases are first discussed, and quite elaborate notes are read with diagnosis and suggested treatment, and this is criticised by the teacher. For example, at the Hôtel-Dieu, one morning a *stagiaire* read the elaborate notes of a case of rheumatic fever (with a preliminary caution from the professor to read clearly and with a loud voice as if he was at a *concours*). The report was praised, but the writing was condemned. Then the assistant gave his account of the case, which had a cardiac complication (muffled heart sounds, an extension of the area of flatness) and a discussion took place as to the possibility of a myocarditis. The patient had had a sore throat for a few days before the articular symptoms and this point was dwelt on fully and Lasègue's work on rheumatic angina was referred to at some length. When the patient's chest was exposed there were the marks of eight leech-bites, and the professor's keen eye at once detected that at least three of these were a good deal below the precordia. "Who put those on?" was the sharp question. The head nurse immediately came, but she was not the one wanted, and one of her juniors was sent for, and she was asked if she knew where the heart was situated. She said she had put the leeches where she was told, and then the externe who had given the order was questioned. It was all done sharply and quickly, but good-naturedly, and meant discipline. The notes were carefully prepared and of the new cases the *stagiaire* gave the diagnosis, which was discussed by the professor first with him and then with one of the assistants.

Another morning a student read a very full report of a remarkable case of multiple erythematous lesions with purpura in a man who had a balanitis and (apparently) non-venereal sores. The diagnosis was by no means easy and the differential points were very well given. On another day a case of lead paralysis with great atrophy of the small muscles of one hand was very fully discussed.

One difficulty, almost insuperable in ward teaching, is the crowding and congestion which make it profitable only to the inner ring. Twenty should be the limit. I counted fifty-five one morning in a ward at the Hôtel-Dieu.

EXTERNES AND INTERNES

The whole work of the hospitals is done by two groups of students known by these names. There are no house surgeons, no house physicians. In the Paris hospitals the externes number about 1000, the internes about 250. Both are appointed by *concours* or examination. A student is allowed to compete in the externe *concours* in his second year; the examination is not severe, consisting of elementary questions in anatomy, elementary pathology and minor surgery. The appointment is for three years and the externes act as assistants in the wards and in the out-patient departments; a good deal of the important work of the hospital is done by them.

The interne is a special French product, unlike anything else in the medical world. He is still a student, yet he has all the responsibility of a practitioner and he is house surgeon, house physician, clinical assistant, laboratory assistant, special research student rolled into one. He lives in the hospitals for four years, a sufficient length of time to give him an exceptionally good education and a large experience. He comes into delightful relations with his chiefs, he lives in charming comradeship with his fellows, and if there is anything in him he finishes his term with an admirable bit of original work which appears as his thesis for the M.D. He can not take his degree while an interne.

A first-class interne is about the best hospital product with which I am acquainted, and it is no wonder that as a body the *internat* is looked on as the special glory of French medicine. The internes do all the work of house physicians and house surgeons and have full control of the patients under the direction of the chiefs. They are paid from $120 to $200 a year and have very comfortable quarters. The examination is held by a jury of ten members of the hospital staff. A variable number of vacancies occur yearly, as high, I see, as 81 in 1898, and as low as 50 or 55. In 1901 there were 66 positions, for which 571 men inscribed their names. Out of these only 266 read their written papers and only 183 were admitted to the oral or final examination. A certain number of provisional internes are also chosen, who act as substitutes. Every year there are certain prizes offered, with one of which is associated the privilege of an extra year in the hospital. It is no wonder that we look on the Paris theses (and those also of the other French schools) as containing some of the most valuable literature of the profession. Take an example—the splendid volume on aphasia by Moutier, which appeared last year (and which contained all the proofs of Pierre Marie's new views on the subject) represented the work done for his thesis.

When his term is finished an ambitious interne will try the *concours* for the position of head of one of the faculty clinics, or, if his tastes lie in the direction of the laboratories, for one of the many positions vacant every year in connection with them. If he decides to stay in Paris in a few years he will get ready for the great hospital *concours*—for the positions of physician, surgeon or specialist—and then he will contest for an *agrégé* professorship, which is as far as his individual efforts can carry him. The final lot, the professorship, is in the lap of the gods, and in the disposing of it, as is well known in Paris and elsewhere, brains are only one factor.

THE HOSPITAL CLINIC

It is fully recognized in Paris that you can not separate the interests of the medical school from those of the hospital, nor either from the interests of the public. The professors of clinical subjects in the university have special wards assigned to them, and each one has a head of the clinic and a head of the laboratory connected with it. The laboratories are provided by the hospitals and every possible arrangement is made to facilitate the teaching of the students and the scientific work in the wards. More of this, when I speak of the hospital organization. There are four professors of clinical medicine—Dieulafoy, Landouzy, Debove and Hayem—each with his head of the clinic and of the laboratories, the interne, five or six externes, twenty *stagiaires*, and usually a group of outside followers. The visit is made at 9 daily, and, as elsewhere, some are punctual, others irregular; but while waiting for the professor one can wander about the ward and see how the patients are progressing. The teaching is chiefly in the wards; the amphitheater is secondary and is very unlike what we regard as a clinic. After the visit the professor adjourns to the amphitheater and gives a set lecture on a case or cases which have been under observation in the wards. The patient may or may not be brought in—usually is not. Corvisart, with whom began set clinical instruction, adopted the plan, and it has ever since been the Paris method.

In an interesting book sent me by my friend Friedel Pick of Prague, Joseph Frank, son of the greater Peter, of Vienna, describes a visit to Paris and Great Britain in 1803; and his account of the clinic at the Charité might have been written to-day. The clinical lecture is usually a finished bit of work and could be taken down verbatim and published with as few corrections as a speech by Lord Rosebery. The method has its advantages when there are no didactic lectures in medicine, but it lacks the interest of an active clinic with the patient and the students and the vigorous discussion. Of course, everything depends on the man, and it affords a good opportunity to bring forward systematically the subjects which are discussed more briefly at the bedside.

Landouzy, the dean, and Dieulafoy are very popular teachers and their wards and lecture-rooms are always thronged. I was glad to find as Professor Landouzy's head of clinic Dr. Salomon, who so skillfully translated my "Practice of Medicine" into French. The Laennec, where Landouzy has his clinic, is an old hospital, but full of interesting cases, and the thorough routine ward work must enable good men to get up a first-rate clinical education.

One of Landouzy's clinics was on a most interesting and unusual subject. Tuberculosis (*bacillose*, they often call it) has been a favorite study of the professor for years, and many who read these lines will have heard his brilliant address last year at the International Congress on Tuberculosis. A young woman of twenty had been in the ward with lesions of both apices. In front of the neck was the scar of a tracheotomy wound for croup at four. She had had pleurisy with effusion at the age of fourteen. The point of special moment in the case was the possibility of infection through the tracheotomy wound. Professor Landouzy had collected a number of cases in which this sequence of events had happened, and he stated that very few persons with tracheotomy wounds lived beyond the twenty-first year—most of the subjects were carried off by tuberculosis. Another interesting observation he had made was the frequency with which individuals with severe smallpox pitting had tuberculosis; he believed that the infection dated from the attack of variola.

An excellent point at all the clinics is the opportunity afforded to the assistants to help in the teaching. On a Wednesday at the Hôtel-Dieu at 10:30, after the morning visit, the professor and assistants and students go into the amphitheater and two of the assistants lecture, half an hour apiece, either describing to the class some special laboratory technic, the subject for demonstration the next day, or a special case is considered. For example, on November 27, the associated symptoms of senile pneumonia and the Widal reactions were fully discussed by two of the assistants; on December 2 the psychology of a progressive dement, a musician, was analyzed, and the patient exhibited; while the head of the clinic, Dr. Crouzon, described the technic of cytodiagnosis in spinal and cerebral affections. This is first-rate experience for the men and the practice of the *concours* gives them an enviable facility of diction.

I "assisted" (to use one of Professor Dieulafoy's kind words with which he introduced me to his class) at the longest clinic I have ever known on a single patient. Now and again it happens that a teacher will find a case of such interest that two days are taken for its discussion, but to go on for five successive Saturdays, and to hold large audiences of students and physicians, and to have interest wax not wane, is a *tour de force* of a master of the amphitheater. And such indeed is Professor Dieulafoy, a pupil of Trousseau and his successor, and author of the most popular French text-book of internal medicine. The Trousseau amphitheater is not very large and by 10:30 on Saturdays there is "standing-room only," and not always that! The audience is largely made up of physicians and one is surprised to see so many women—one morning I counted twenty-five. The subject of this memorable clinic was a woman, looking about thirty-six years of age, who five years ago had had an illness with cerebral symptoms and fever. Following this she began to have epileptic fits; she then developed complete left-side paralysis of the facial, partial paralysis of the third and paralysis of the sixth in the opposite side. The history and the attacks were the subject of the first lecture, at the end of which a written statement was read summarizing the main features; the second lecture dealt with the diagnosis of the type of epilepsy; the third with the situation of the lesions which would explain the symptoms; a positive diagnosis was made of a basilar meningeal lesion; the fourth lecture considered the nature—tuberculosis and coarse gummata and specific arteritis were excluded and a diagnosis was reached of a chronic syphilitic meningitis; while in the last lecture the prognosis and treatment were considered in full and the patient's rapid improvement under specific treatment was held to bear out the diagnosis of the nature of the trouble. The patient was brought in for a short time each day. Dieulafoy is an extraordinarily dramatic lecturer—all the accessories of facial expression and of movements of hands, arms and shoulders are used. A rapid utterance, the short interrogative method, the appeal to the patient, the choice language, a pleasing voice, a keen sense of humor—all combine to make the Saturday clinic at the Hôtel-Dieu a great treat.

Professor Raymond, at the Salpêtrière, Charcot's successor, has one of the most popular clinics, and in his hands the traditions of the great master are fully sustained. The extraordinary wealth of material makes it possible to bring together large groups of cases illustrating special diseases. On two successive clinics, cases were shown illustrating the relationship of Friedreich's ataxia, Marie's heredo-cerebellar ataxia and the family forms of spastic paraplegia. On another day two members of different families, the subjects of hereditary optic atrophy, were demonstrated. The Charcot clinic is one of the best organized in Paris, and, under Professor Raymond's direction, maintains its reputation as the leading school of neurology in Europe. The men in attendance are almost all postgraduates and the general arrangements for study and research are admirable.

On the whole I have the impression that the Paris medical student gets very close to the patient, and, if diligent and successful in becoming successively externe and interne, he certainly has opportunities of an altogether exceptional character. I am not so sure about the ordinary *stagiaire*, who seems rather out in the cold. Many reforms are under discussion. It is urged, and rightly I think, that there are too many theoretical lectures, but that is a point which has already been settled by the students—who simply do not attend them. The audiences in the lecture-rooms of the medical school are largely graduates and casual visitors. With the introduction of a five years' course it should be possible to plan a model curriculum. The number of highly trained and enthusiastic young teachers is very large, and the arrangements for clinical instruction are excellent. Above all, the French realize that the only teaching of value in medicine and in surgery is at the bedside, and they may be able to work out a scheme in which, under modern conditions, the science and the art, the art and the science, will go hand in hand throughout the five years of the curriculum.

(*To be continued*)

Therapeutics

CONSTIPATION

That ever-troublesome condition can not be too frequently discussed, as not only the laity, but the profession seem to fail to recognize its importance as a predisposing and primary step to more serious conditions. The layman and the layman's parents allow the condition to develop, and the physician gives either drugs, or a little advice and drugs, when he should give very few drugs and very much advice.

Dr. B. K. Ellis, of Greeley, Colo., in the *Therapeutic Gazette*, September, 1908, offers many valuable suggestions for the management of constipation. He well says that "a careful analysis and accurate diagnosis of each causal factor is essential to the intelligent treatment of this symptom" or condition. As has been so frequently pointed out, he says "the consumption of highly seasoned foods and a close attention to social or financial duties with the consequent neglect of the calls of Nature are largely the starting point of chronic constipation." If the reflex indication which fecal matter in the rectum gives is neglected, such reflexes either become less and less acute, or finally may be lacking, and fecal matter accumulating dilates the rectum. Then it is only by strenuous muscular effort, or by excessive dilatation with enemata, that movements are obtained.

Constipation may be caused by the taking of food that is so completely digested as to leave insufficient residue to act as a stimulus to intestinal peristalsis. On the other hand, large amounts of indigestible substances may be taken and, dilating the walls of the intestine, in time cause atrophy and consequent constipation. Either of these conditions being diagnosed as an etiologic factor in the constipation, the proper treatment suggests itself.

If the contents of the upper intestine are rapidly digested and peristalsis is abnormally slow, the water from the intestine may be too completely absorbed, the intestinal contents become less fluid, and sluggish passage of the contents of the gut is the consequence. Also, if large amounts of liquid are passed by the kidneys, or if the person sweats profusely and insufficient water is taken into the system, the water from that reason is absorbed from the intestines and constipation is the result.

If constipation is the only condition present it should be readily corrected if the causes are once known and the antidote ordered. If constipation is a symptom of another condition, or a coincident condition added to the disease or condition that is present, its treatment may not be, of necessity, the best for the constipation, but [illegible] perhaps, modified by the treatment neces-[illegible] or concomitant conditions. [illegible] part of the treatment is the cor-[illegible] of the patient, and generally the patient needs food that leaves more cellulose for the intestinal muscles to act on. This means plenty of vegetables. Fruits should be given freely, except the astringent fruits. The amount of water taken depends on the patient's habits and the condition of the circulation. A patient who is muscularly active should drink more water than the one whose life is sedentary. A glass of cold water drunk in the morning while dressing is a great help to a physiologic movement of the bowels directly after breakfast. The morning coffee is also a stimulant to peristalsis.

The patient should go to stool every morning at the same hour whether the desire is present or not, and should attend to the matter at hand, and, as Ellis says, should not read for diversion.

Abdominal massage, calisthenics, regulated exercise, walking, rowing, riding, golf playing, or any other muscular exercise that seems advisable should be ordered for the patient of sedentary habits, and it must be urged on him that if the habit of constipation is not now cured the future promises intestinal indigestion, dyspepsia, imperfect action of the liver, imperfect bile, nervous irritations, kidney irritations, and early cardiovascular-renal disease, i. e., arteriosclerosis, weakening of the heart, and chronic interstitial nephritis.

Also it is certainly the fact that a patient who has been long constipated and suffering from more or less chronic toxemia, as shown by dull headaches, sallow skin, coated tongue and poor digestion can not possibly withstand acute diseases, or operations that may be necessary, as well as a patient who has not had a long habit of constipation. In other words, a daily normal movement of the bowels is an asset so far as future health emergencies are concerned, the same as is a heart that has not been damaged by tobacco.

Before any severe exercise or any abdominal massage is ordered, or advised, a careful abdominal examination should be made and the physician assured that there is no inflammatory conditions present, as chronic appendicitis, gall-bladder disturbances, pelvic or other disturbances.

Ellis applies "manual massage to the abdomen from fifteen to twenty minutes, beginning with light, circular stroking of the abdomen about the umbilicus, first having lubricated well the parts with olive oil; these strokes are gradually widened and pressure increased until the course of the colon is being massaged deeply, all fecal masses broken up and moved down toward the rectum." When massage is deemed inadvisable or inconvenient, faradic electricity may be used. Ellis places "a large electrode over the lumbar or sacral spine and the other is moved over the abdomen, stroking from right to left." He advises "the interruption of the current from two to six times a second, and the duration of the seance and strength of current depend on the results and sensations of the patient."

If ordinary means and methods fail to cure the constipation, it will often be found that the anal sphincter is very tight and does not relax properly, so that, when fecal matter is in the rectum, its evacuation is almost impossible. With this condition of the sphincter present the rectum is often found greatly dilated. Forcible dilatation of the sphincter ani under an anesthetic, or its gradual dilatation with bougies or water bags, is generally advisable.

A not infrequent, though often undiscovered cause of constipation is overdevelopment of the semilunar valves or the valves of Morgagni. These hindrances to the passage of fecal matter, situated just above the external sphincter, are amenable only to surgical intervention, which procedure, however, is easily accomplished with satisfactory results.

If the patient has a habit of using daily large rectal enemas, almost irrigations, or taking large quantities of water and retaining it for a time, dilatation of the rectum and of the sigmoid flexure, and even of the descending colon, has occurred. In these cases help may be obtained by a daily diminution of the bulk of water used.

The best medicinal treatment of constipation consists in the administration of the fluid extract of rhamnus purshiana (cascara sagrada) or some form of aloes or aloin (generally best combined with belladonna and strychnia). Sometimes podophyllin may be used separately or combined with other laxatives. There are no other laxatives or cathartics so likely to cure constipation as these drugs. Whichever one of these is used, it should be given, week by week, in gradually diminishing doses. Whether they should be given in small doses three times a day, or larger doses once a day depends on the conditions. Generally, the patient not being sick and not willing to be bothered, and with the intent of having a stool after breakfast, and the medicine requiring a certain length of time to act, directly after supper or at bedtime, in one dose, is the best treatment. However, even with the best possible care, when these drugs are given, some patients require a dose daily for months and even years, and can not obtain a stool without it. This is generally not due to the action of the pill on the mind, as the substitution of an inactive tablet will prove.

Perhaps the next best laxative is phenolphthalein, the new synthetic cathartic. This drug seems to be harmless, and seems to act well, and, if given in tablet, should be crushed with the teeth before swallowing, as it apparently acts better when well granulated.

In the simple constipation that is now being discussed it is inadvisable to resort regularly to enemas of any kind or to more brisk cathartics than those above mentioned or to saline cathartics.

Unfortunately, the drug of most promise in constipation, cascara sagrada, as obtained from the drug stores is many times worthless, so far as laxative activity is concerned. On the other hand, some cascara preparations offered to the profession contain other ingredients than cascara, and consequently being more active are supposed by the physician to be more satisfactory, but the patient is really getting a more active drug than the physician desired. The physician should, therefore, be very careful to select and to obtain the best possible pure cascara sagrada preparation for each patient, and after finding the amount of this preparation that the patient needs for laxative effect, should gradually reduce the dose week by week until the patient is cured.

TAPEWORM

The frequency with which treatments to eradicate a tapeworm from the intestine are unsuccessful is well known. The cause of this is generally because the intestines have not been thoroughly cleaned: in other words, the intestines, for the best action of the anthelmintic, should be as nearly empty as possible not only of food and the products of digestion, but also of the large amount of mucus which irritation from the parasite has caused.

Consequently, before the anthelmintic is administered, at least two days should be devoted to the preparation of the patient for the treatment. The patient should give up his business and attend to the matter in hand. The diet should be liquid; milk, not more than a quart, beef tea and coffee if he desires. During these two days he should receive a small dose of salts three times a day so that the upper part of the intestines may be thoroughly cleaned. The following is satisfactory:

℞.	gm or c c.		
Magnesii sulphatis	60		℥ii
Spiritus chloroformi	12	or	fl ʒiii
Aquæ, ad	180		ad, fl ℥vi

M. et Sig: A tablespoonful, in water, three times a day, an hour before meals.

If there is much purging, the frequency of the movements may be lessened by an occasional dose of 1/10 of a grain of morphin, the object aimed at being to have the intestinal canal cleaned, especially of mucus, before the anthelmintic is to be administered and at the same time not to prostrate the patient too much.

At bedtime the evening before the specific drug is to be administered the patient should receive two tablespoonfuls of the above magnesium sulphate mixture. If this has not acted well by 8 o'clock the next morning, the same dose should be repeated.

The male fern should be given as follows:

℞	gm		
Oleoresinæ aspidii	4	or	ʒi

Fac capsulas, 8.

Sig.: Four capsules, with half a glass of hot water at 9 a. m., and four capsules, with hot water, at 10 a. m. [Important: Before taking the above capsules each one should be uncapped.]

At 12 o'clock three tablespoonfuls of the magnesium sulphate mixture should be taken to insure the rapid passage of the male fern through the intestine lest too much absorption take place.

During this morning no nutrition should be taken other than black coffee, clear tea, or bouillon.

Except when momentarily otherwise engaged, the patient should be in bed, and should stay in bed the remainder of the day. For unavoidable faintness brandy may be administered at any time, or a hypodermatic injection of strychnin may be given. After 1 o'clock any food may be given the patient that he desires.

During the three or four hours of this active treatment, viz., from 10 a. m. to 1 or 2 p. m., the physician should remain with the patient, or a thoroughly trained nurse should be in attendance.

The stools should all be passed into receptacles where they can be thoroughly strained afterward in order that the parasite's head may be sought, and if the above treatment is carried out it will generally be found.

BATH POWDER

As many esthetic persons delight in the pleasure of an effervescing perfumed powder added to the bath, the following from the *Druggists Circular*, October, 1908, seems to be a pleasant suggestion for such a powder:

Sodium bicarbonate	3 ounces
Tartaric acid	2½ ounces
Starch	.4 ounces.
Oil of lemon	½ dram
Oil of orris	5 minims
Oil of ylang-ylang	5 minims

(Any perfume may be substituted for the above if preferred.) As many such powders may be ordered as desired, and one powder added to the bath when it is ready.

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CONGENITAL FAMILY CHOLEMIA

One of the most fascinating features of the study of medicine is the constantly occurring changes. New signs are continually being described, and new diseases are constantly being split off from groups which appeared in the not distant past to be reduced to their final segregates. Among these relatively new conditions is one so far but little noted in this country, the disease known as congenital family cholemia or acholuric jaundice. Isolated instances and small groups of cases have been described for years, and recently Hawkins and Dudgeon[1] have collected most of these, and have added some carefully studied cases of their own. It is probable that, like other apparently rare diseases, the condition will be found to be more common when more widely known.

The main characteristics of this curious affection are indicated in its name; it tends to affect several members of a family, it is usually congenital, and it is characterized by the presence of biliary constituents in the blood. The patient differs from most jaundiced individuals, however, in several particulars. He or she, for both sexes are equally attacked, is generally jaundiced from birth or shortly after, and the jaundice persists for years with little or no change. There is a difference also from ordinary icterus in that the urine is free from bile pigment, the stools contain bile, and itching and other signs of constitutional disturbance are lacking. There is no gastrointestinal disturbance, the appetite is good, and the bowels regular. These patients develop normally, both physically and mentally, are able to bear the stress of ordinary workaday life, and in the case of women to bear children. In spite of this there is present besides the jaundice a considerably enlarged spleen and a moderately severe grade of anemia. So far as can be judged from the small number of cases recorded, life is not materially shortened by the disease. These patients may seek relief from the jaundice because their peculiar color caused unfavorable comment; they may at times have pain over the liver and spleen with deepening of the jaundice and slight fever, but, as a rule, they live as long as the average individual.

The relation of this condition to other forms of congenital icterus and to hypertrophic cirrhosis is dubious, and the cause of the condition is still obscure. Pick has reported cases of family icterus without splenic enlargement, and, on the other hand, family icterus with hepatic involvement has been described. In congenital family cholemia no cirrhosis of the liver is present. Certain physicians of the French school have tried to show a relation between this condition and dark muddy complexions, melanoderma, various pigmentary skin diseases, and certain gastrointestinal, renal, and articular affections, all of which are claimed to be due to an excess of bile in the blood serum. These claims are, to say the least, somewhat fanciful. Hawkins and Dudgeon suggest as a possible cause of congenital family cholemia inborn defects in the minute structure of the liver whereby the bile can enter directly into the lymphatics, or changes in the ducts producing alterations in the bile pressure. In either event the condition produced would resemble ordinary chronic jaundice, and, as these authors point out, the blood changes in cholemia, moderately severe anemia with poikilocytosis and megaloblasts, are not those of ordinary jaundice. They are inclined to believe that the jaundice is merely symptomatic, a hematogenous icterus due to hemolysis. They show that the red blood cells in these patients are more fragile than normal, and point out that occasionally they have hemoglobinuria. It seems probable that the disease is primarily one of the blood-forming organs, and that the jaundice is only symptomatic. The exact nature of the defect in these organs is still a question.

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[1] Quart. Jour. of Med., January, 1909.

COSMOBIA, A NEW CONCEPT IN TERATOLOGY

The recent activity in the field of teratology is more than a revival of the older descriptive methods. Parallel with Mall's[1] studies on the causes underlying the origin of human monsters, we have had an extensive series of researches in the field of experimental teratology, of which the latest and most striking examples are seen in the artificial production of cyclopean monsters by Stockard and Lewis. Stockard[2] finds that by treating the eggs of the common minnow, *Fundulus*, with solutions of magnesium chlorid immediately after fertilization he can produce at will as high as 50 per cent. of cyclopean monsters of various degrees of abnormality. Dr. Warren H. Lewis[3] has reported a parallel series of experiments in which he has produced almost identical defects in the same species of fish by destroying in later developmental stages the extreme anterior end of the medullary plate before it has invaginated to form the central nervous system. Very recently, too, Dr. H. H. Wilder has supplemented his interesting critical examination of an extensive series of double studies on duplicate twins and double monsters[4] by a critical examination of an extensive series of double monsters, Janus types, cyclops types and related forms.[5]

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[1] Jour. Morphology, February, 1908.

[2] Science, Oct. 2, 1908: Jour. Exper. Zool., June, 1907.

[3] Association of American Anatomists, Baltimore meeting, Dec. 29, 1908.

[4] Duplicate Twins and Double Monsters, Am. Jour. Anatomy, Sept., 1904, iii, No. 4.

The interesting feature of the latter paper lies in the fact that Dr. Wilder has brought under one law the whole series of symmetrical monsters, both "monsters of defect" and "monsters of excess." All bilaterally symmetrical vertebrate bodies, of both usual and unusual forms, develop in accordance with orderly laws of their own and are termed *"cosmobia,"* orderly living beings, as distinguished from deformities, or lawless aberrations of development. Cosmobia may be normal beings or abnormal or unusual. The abnormal cosmobia are some of them less than typical individuals (*"monstra in defectu"*); some of them are more than single individuals (*"monstra in excessu"*).

The recognition of the kinship between the defective monsters of the cyclops type and double monsters, or diplopagi, enables Dr. Wilder to construct several interesting series of forms based on recorded cases. The most interesting of these, and also the one most clearly illustrating the principle of cosmobia, is the linear series extending from cyclopean monsters of defect on the one hand to completely separate duplicate twins on the other hand. Starting with the extreme cyclopean defect without nose or eyes, we pass by close stages to the cyclopean forms with the two eyes completely fused in the middle line and nose abortive, then to forms with the eyes incompletely fused, becoming progressively farther apart, until the nose is able to grow down between them. Then follow in the series normal beings with very narrow features, average features and very wide features, leading up to incipient duplication. Various stages of diprosopy are next enumerated: forms with the nose and mouth duplicated but only two eyes; double nose and mouth and three eyes, two lateral and one median, the median eye representing a fusion of the right eye of one of the two individuals with the left eye of the other; then various stages of farther separation of the features, leading to two-headed monsters and finally to perfect, separate duplicate twins.

Dr. Wilder's contention is that each member of this series, both the normal and the abnormal, develops in accordance with a definite lawful pattern of its own, and that all these beings should be distinguished from the misshapen deformities due to sporadic or special causes. The careful dissections of representatives of several of these cases which are presented in the paper go far toward a substantiation of his claim.

THE RELATIONS BETWEEN SO-CALLED ENDOTOXINS AND TOXINS

The theory that the symptoms of intoxication of many infectious diseases, e. g., cholera, typhoid, plague, dysentery, tuberculosis, are caused by the so-called bacterial endotoxins, that is, substances set free on microbic disintegration as distinguished from toxins which are regarded as true secretions, was advanced by Pfeiffer about sixteen years ago. According to this theory, there is no real secretion of toxins by the bacteria in question, at least not of such kind and amount as to account for the intoxication; on the contrary, the endotoxins are so firmly bound to the bacterial cells that they are liberated only by severe, disintegrative procedures, and in the infected body they are held to be set free only as the bacteria disintegrate and pass into solution under the influence of the antibacterial substances of the blood. The basis for the theory was the observation Pfeiffer made on guinea-pigs injected intraperitoneally with living cholera germs: Before long the peritoneal contents and blood were sterile, the cholera germs being rapidly killed, and yet the animals died from intoxication caused, he concluded, by poisons contained in the bacterial substance itself. Analogous results were obtained with typhoid and other bacteria, and the intraperitoneal injection of bacteria killed by heat, toluol or chloroform produced the same symptoms and the same results as the injection of virulent living bacteria. Subsequently when prophylactic inoculations of killed bacteria came to be practiced on human beings it was soon learned that they may cause marked intoxication of human beings also, so that careful dosage is required. Certain clinical observations also harmonize well with the endotoxin theory. Thus in typhoid and paratyphoid fever the symptoms of intoxication do not reach their height when the bacteria in the blood are most numerous, namely, in the beginning of the attack; the severe intoxication sets in as the agglutinating and bactericidal powers of the blood increase above normal and the bacteria disappear more or less completely. Whatever toxins are secreted early are tolerated readily, it would seem, but the liberation of endotoxins on bacterial solution causes severe symptoms.

The theory as originally propounded left the question of the formation of antiendotoxins open, and the continuous failure to secure really satisfactory evidence of such antitoxins (until possibly just recently) before long led to the belief that the endotoxins have no antigenic properties, consequently differing radically from the true toxins such as are formed by the diphtheria and tetanus bacilli and have the power to induce the formation of specific antitoxins. By way of example, it may be mentioned that patients convalescing from typhoid fever have been found to be just as susceptible to the toxic action of killed bacilli as normal persons. Similar observations have been made as regards plague. These results are not necessarily decisive, however, as the observations may have been made before immunity had developed. Animals immunized with typhoid, cholera and other bacteria of this class yield serums with specific bacteriolytic, opsonic and agglutinating powers, but with little or no real curative effect outside of the laboratory and then only under special conditions not obtainable in actual practice. Nevertheless, the search for active antiendotoxic serums has been continued with the result that recently a number of investigators have come forward with results which they claim overthrow Pfeiffer's whole endotoxin theory, establishing in its stead the theory that in the infections under consideration we are after all dealing with toxins of the regulation type and fully endowed with antigenic powers.

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[5] The Morphology of Cosmobia, Am. Jour. Anatomy, December, 1908.

On the basis of results obtained by himself and others, Kraus claims that poisons endowed with antigenic powers, hence neutralizable by specific antitoxins, constitute the real pathogenic agents in cholera, plague, typhoid, dysentery and cerebrospinal meningitis. If the views of Kraus and others prove correct, the outlook for a great enlargement of the field of usefulness of antitoxic therapy would be most promising. At present there are, however, weighty reasons against the unqualified acceptance of these views. As pointed out by Pfeiffer[1] himself, many of the experiments on the results of which Kraus and others base their claims were made with filtrates of old broth cultures and with substances obtained by various methods, all of which may have contained poisons more or less artificial in nature and consequently without real significance so far as the actual spontaneous disease is concerned. When endotoxins are split up by autolysis or other processes, it may well be that among the products true toxins will be found which, however, play no part or only a subsidiary one in the natural intoxication. It is probable, too, that bacteria regarded as producing or containing endotoxins may produce exotoxins which, however, can not explain adequately the pathogenic powers of the bacteria themselves. As examples, one can mention the staphylococci which produce leukocidin, a true toxin, and certain vibrios that produce hemolysins, likewise true toxins. If it is insisted that true antiendotoxic qualities are to be attributed to such serums only as are able to neutralize *completely* and to render physiologically harmless intact toxic bacteria, whether living or killed, then it becomes exceedingly doubtful whether it rightly may be claimed that antiendotoxins have been obtained and that the whole endotoxin theory must be abandoned. Many investigators are now at work on problems involved in this question of endotoxins, and undoubtedly further developments will come before long.

THE LONGEVITY OF LEUCOCYTES IN ALIEN SERUM

We are just beginning to realize the possible applications of experimental serologic and biologic methods to diagnosis. Since the clinical application of Pfeiffer's phenomenon other serobiologic tests have been devised, notably Uhlenhuth's test for blood stains, Wassermann's test for syphilis, and Wright's test for opsonins. Recently, we believe, there have been suggestions that the phenomena of anaphylaxis may be utilized in the diagnosis of tuberculosis. An interesting line of investigation, as yet but partly worked out, has been suggested by H. C. Ross.[*] He has devised a method of estimating the life of leucocytes after they are removed from the body, and has tested the effect of the plasma of other persons, healthy or suffering from infectious diseases, on the leucocytes of normal individuals. He finds that normal leucocytes in their proper plasma live a considerable length of time, over forty-eight hours very often, outside the body. He also shows that the leucocytes of healthy people die more quickly than usual in the presence of blood plasma from other healthy people, and much more rapidly than usual in the plasma of people with malaria, typhoid fever or phthisis. On the other hand, the life of the leucocytes from a person suffering from phthisis or typhoid is very little affected by the plasma of another person suffering from phthisis or typhoid. This suggests that in a person with an obscure disease the leucocytes might be tested with plasma from people with a variety of diseases, especially plasma from those diseases which are suspected in the obscure case. In case the leucocytes from the patient with the obscure illness are resistant to one plasma only, it might fairly be assumed that the patient was suffering from that disease, or had been recently, and that the leucocytic resistance to that particular plasma was explained by an immunity of the leucocytes to the poison of the disease. The technic of the test is rather complicated, but less so than that of the Wassermann test. It is difficult to see, *a priori*, why the method might not turn out to be of great value. It is probable that serums from patients with various diseases could be kept in stock, and that in this case the test would not be a very complicated one.

THE INFLUENCE OF CALCIUM AND CITRIC ACID ON BLOOD COAGULATION

Since Wright's researches in 1893 the salts of calcium have been widely used in various conditions in which the coagulability of the blood was thought to be reduced. At that time Wright claimed that single doses of calcium chlorid would reduce the coagulation time, in some instances, from 60 to 70 per cent. The general idea underlying calcium therapy has been that the internal administration of the calcium salts increased the calcium in the blood, and this induced more rapid coagulation. Citric acid, on the other hand, reduces the calcium content of the blood, and its internal administration is claimed to decrease the coagulability of the blood. While these effects have been experimentally demonstrated, it has still been a question whether or not the increase or decrease in calcium in human blood, produced by the administration of calcium salts or citric acid, was great enough to cause an increase or decrease in coagulability. Addis[†] has recently restudied the question, using a more accurate method of calcium determination, and a coagulometer more accurate than that of Wright. He concludes that the coagulation time of the blood is unaffected by the internal administration of soluble calcium salts or citric acid in the doses which we ordinarily prescribe. He acknowledges that the amount of ionizable calcium is increased by the administration of calcium salts and diminished by the use of citric acid, but states that the increase and decrease is much less than is needed to have any appreciable effect on coagulation. It looks as though we should either have to increase considerably the dosage of the calcium salts and citric acid when we give them for the purpose of affecting coagulability, or we shall have to find some more efficient means of introducing them into the circulation. In view of the above facts, the recent observations of Chantemesse[1] must be taken with a grain of salt. While this author seems convinced that he is able to control blood coagulation, his most convincing case, the typhoid patient with both hemorrhage and thrombosis, might have been due to coincidence. The occurrence of hemorrhage and thrombosis in the same patient is by no means unknown.

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[1] Centralbl. f. Bakt., xlii, Supplement to part I. Referate, 1.

[*] Lancet, Feb. 9, 1909.

[†] Quart. Jour. of Med., January, 1909.

THE AUTOMOBILE NUMBER

In the presentation of its third Automobile Number The Journal of the American Medical Association is contributing to the practitioner a symposium of experience on a very practical question. Except for the few whose work is limited entirely to office practice, the question of horse or automobile comes very close to the physician. The question now seems to be. not "Shall I use an automobile?" but "What machine shall I buy?" and on this point there is abundant testimony that any good perfected machine will give good service, but that some are better than others under certain conditions. It is apparent from the opinions expressed that there are arguments for various types of cars according to the local conditions in which they are to be used. It is also evident that a machine with which one man has been dissatisfied may have been highly satisfactory to another. Sometimes this is found to be because a physician's first automobile has to bear the brunt of teaching him the fundamental axiom that an automobile has its limits and must receive intelligent care. In addition, a physician's first automobile is not infrequently an experiment, or a second-hand one partly worn, bought cheaply with the intention of learning—at a minimum outlay—not only how to run a car and care for it, but also what type of machine he will wish to purchase when he is ready to put more money into it. Again, as before, emphasis is laid by many writers on the value of an automobile and its care as an avocation—a mind-freeing diversion from the strain of practice. This is a point by no means to be lightly considered. We again express our thanks to all who have contributed to make this Automobile Number a success. As usual, the names of the automobiles are not given in the text, but are indicated by numbers. These numbers and the corresponding names of the cars, with also the names and addresses of the manufacturers, are given in the Automobile Key, a separate pamphlet. A copy of this key will be sent on request if a self-addressed stamped envelope be enclosed.

Medical News

ALABAMA

Physician Fined.—After two mistrials, a jury in Morgan county is said to have returned a verdict for $1,750 against Dr. John B. Shelton, New Decatur, for alleged malpractice. It is claimed that owing to an error in a prescription of the physician, a 6-year-old child was made blind.

Society Meeting.—At the annual meeting of Jefferson County Medical Society, held in Birmingham, Dr. Joseph D. Heacock, Birmingham, was elected president; Dr. Zachariah B. Chamblee, North Birmingham, vice-president; Dr. Arthur F. Toole, Birmingham, secretary-treasurer; Dr. Henry N. Rosser, Birmingham, county health officer, and Dr. Russell Mc. W. Cunningham, Ensley, censor. Dr. Edward H. Sholl, Birmingham, after serving 25 years as a member of the board of censors, resigned. On this announcement being made, Dr. Cunningham presented Dr. Sholl with a handsome loving-cup.——The lease of the new quarters for the society in the Chamber of Commerce Building has been signed by the president. Space has been secured providing for a general meeting room, reading place, secretary's office, and the use of the auditorium.

CALIFORNIA

Hospital Notes.—Patients were received for the first time in the new Merritt Hospital, Oakland, January 23. The completed part of the hospital will accommodate 40 patients, and has been erected at a cost of about $200,000. Dr. Alvin Powell has been appointed resident physician.——The Sisters' Hospital, South Chico, was totally destroyed by fire January 14, with a loss of $10,000, partially covered by insurance. The patients were removed in safety. Negotiations have been made for the purchase of the Roper family residence, to be used as a temporary hospital.——Dr. Francis E. Corey has opened a small hospital in Alhambra.

County Medical Society Meeting.—At the annual meeting of San Francisco County Medical Society, held January 12, the following directors were elected: Drs. Harry E. Alderson, Philip K. Brown, Frank B. Carpenter, William E. Cheney, Charles M. Cooper, George F. Ebright, Philip Mills Jones, Henry B. A. Kugeler, August J. Lartigau, Samuel J. Hunkin, Harry M. Sherman, Emmet Rixford, Charles G. Levison, Herbert C. Moffitt, Howard Morrow, Arthur A. O'Neill, F. Dudley Tait, George H. Evans, Morton R. Gibbons, George B. Somers, and John C. Spencer. At the meeting of the directors, January 19, Dr. August J. Lartigau, for some time librarian of the society, was elected president.

COLORADO

Clinical Years at Denver.—An amendment to the constitution of the state has been passed by the legislature which gives permission to the state university to conduct the last two years of the medical course at Denver on account of the larger clinical facilities which obtain there. The bill has to be submitted to and approved by the people at the next general election before it becomes a law.

CONNECTICUT

Society Meetings.—At the annual meeting of the Waterbury Medical Society, Dr. Charles A. Monagan was elected president; Dr. John M. Benedict, vice-president; Dr. Edward F. Ashley, secretary, and Dr. Charles S. Rodman, treasurer.——The Society of Regular Physicians, at its annual meeting in New Britain, elected Dr. T. Eban Reegs, president; Dr. William W. Brackett, vice-president; Dr. Catherine H. Travis, secretary-treasurer, and Drs. Herman Stosser, Jay S. Stone and Samuel W. Irving, censors.

Report of Tuberculosis Commission.—The commission on tuberculosis, in its report to the General Assembly, recommends notification and registration of all cases of tuberculosis in every community; control of indiscriminate expectoration; rational tenement house legislation, embracing construction and subsequent inspection; sanitary supervision of all buildings where people are brought into intimate association; scientific supervision of the dairy and food industries, and intelligent efforts to educate the public on sanitary precautions.

Milch-Goat Keepers' Meeting.—The first annual meeting of the Connecticut Milch Goat Keepers' Association was held at West Hartford February 2. The president, George W. Smith, Melrose, made a demonstration analysis for milk fat and milk solids, showing that cows' milk contained 4.4 per cent. fat and 14.16 per cent. solids, while goats' milk contained 5.8 per cent. fats and 15.46 per cent. solids. Increased interest is being manifested in the milch goat industry, and the membership in the association already includes seven states in the Union. Several physicians have united with the organization, and the first annual field meeting is set for July 5, at the home of Milo N. Woodring, Hamden, near New Haven.

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[1] The Journal, Feb. 20, 1909, p. 668.

ILLINOIS

Occupational Disease Commission Appointed.—The governor appointed on March 1. the following persons, members of the Commission on Occupational Diseases, authorized by the General Assembly: Dr. George W. Webster, Chicago; Dr. James A. Egan, Springfield; Hon. David Ross, secretary of the bureau of labor statistics; Hon. Edgar T. Davies, chief factory inspector; Prof. Charles R. Henderson, James Simpson and Drs. Ludvig Hektoen, Alice Hamilton and Arnold C. Klebs, Chicago.

Interne Examination.—The Cook County Civil Service Commission announces that examination will be held March 9 to 11, for interneships at Cook County Hospital and at the Dunning institutions. The service at Dunning is for one year and includes a compensation of $12.50 per month, with board, lodging, laundry and an additional $150 to be paid at the end of twelve months' continual service. On March 16, examinations will be held for an *x*-ray operator and a librarian at Cook County Hospital.

Bills Introduced.—Senate bill No. 4, introduced by Mr. Glackin, which provides for a state sanatorium for consumptives, is still in committee on appropriations. Senate Bill No. 35 prohibits the selling of undrawn poultry. Senate Bill No. 43 provides for the testing of sight and hearing of pupils in the public schools. Senate Bill No. 139, introduced by Mr. Glackin February 16, which enables cities, villages and counties to maintain public tuberculosis sanitoria, has passed the senate and is now on its third reading in the house. Senate Bill No. 214, introduced by Mr. Downing. provides a state board of osteopathic examiners, the examination to include "osteopathic obstetrics," gynecology and minor surgery, and also the issuance of licenses to osteopaths. House Bill No. 22 prohibits the admission of children to public schools unless they shall have been vaccinated. House Bill No. 23 requires vaccination of children before reaching the age of two years, and also prohibits the admission of unvaccinated children into the public school. House Bill No. 86. an act to regulate the practice of chiropody in the state, still lies on the speaker's table. House Bill 173 is the same as Senate Bill 214, just referred to. The State Board of Health has sent a copy of these bills, regulating the practice of osteopathy, to the secretaries of all the medical societies in the state.

Chicago

New Step in Health Fight.—Health Commissioner Evans has ordered placards placed in every house where there is diphtheria, typhoid fever, scarlet fever, or other infectious disease, and as many other homes as possible, giving concise and plain hygienic instructions in cases of communicable diseases.

Fresh-Air Hospital Incorporated.—Papers of incorporation for an institution to be known as the Chicago Fresh-Air Hospital, to be conducted in Cook county without pecuniary benefit, were filed February 26 at Springfield. Dr. Albert J. Ochsner and Ethan A. Gray appear as promoters. A tract of twenty acres is to be chosen immediately as a site for the institution.

Health Department Appropriation.—As a result of a conference which took place February 25, between the health commissioner and the city council, it is hoped that the appropriation of $636,102, asked for the health department, will be saved intact. The health commissioner called attention to the fact that, although the council last year appropriated $835,204 for this purpose, the department had spent only $606,410.

INDIANA

Personal.—Dr. James M. Pinkston, Holton. has been elected
coroner of Ripley county.——Dr. David C. Roney Milan, is
spending this month and April in Florida.——Dr. Russel T
Olmstead, Versailles, has moved to Milan.——Dr. William G
Ralston, Evansville. has just celebrated his ninetieth birthday.

In the Hands of the Law.—Dr. J. W. Hartsog, Fort Wayne
is said to have been fined $25 recently for practicing in Colum
bia City without a license.——In the case of Orland C. Brown
arrested recently at Logansport at the instance of the Cass
County Medical Society, charged with selling medicine with
out a license and released February 15, he was rearrested the
same day on other charges filed by the society, and is said
to have been taken to jail to await trial.——A magnetic
healer of Logansport, named Charles Kerns. is said to have
been arrested at Walton on charges filed by the Cass County Medical Society of practicing medicine without a license.——In the case of Jesse A. St. John, an itinerant, charged at Covington with practicing medicine without a license, the jury disagreed.

MARYLAND

Hospital Report.—The eleventh annual report of the Peninsular General Hospital, Salisbury, for 1908, shows that 636 patients were treated during the year, and that there were 508 operations, 90 of which were for appendicitis.

Correction.—The item in The Journal of February 13, regarding Dr. Gordon T. Atkinson is not correct. Dr. Atkinson, himself, is well and in active practice, and it was a patient of his who was announced as ill with bulbar paralysis.

Antituberculosis Association Formed.—As the result of the tuberculosis exhibit made by the Maryland Association for the Prevention and Relief of Tuberculosis at Snow Hill in February, a local association has been formed in that place, under the presidency of Senator John W. Smith. Funds are being collected and a visiting nurse has been employed.

Personal.—Surgeon Charles F. Stokes, U. S. Navy, has been assigned to temporary duty as head of the medical department of the U. S. Naval Academy. Annapolis.——The home of Dr. Edward A. Wareham, Hagerstown, was destroyed by fire February 4, entailing a loss of $20,000, partially covered by insurance.——Dr. Frank H. Hedges, Frederick, was seriously injured in a runaway accident February 5.

Baltimore

Hopkins' Day Exercises.—At the Hopkins' Day exercises, February 22. Dr. William H. Welch announced that the gift of Mr. Henry Phipps to Johns Hopkins Medical School and Hospital for the advancement of psychiatry already amounts to more than $1,000,000. and that Mr. Phipps desires the work to go on at his expense.

Invalid Children's Home Unites with Hospital.—The Harriet Lane Home for Children has united with Johns Hopkins Hospital for a term of twenty years, the hospital furnishing the ground, physicians. nurses and maintenance, and the home erecting the building and appointing the physician in chief and head nurse. The fund for the charity amounts to about $500,000.

Personal.—Dr. Claude van Bibber has been confined to his house for several weeks as the result of a fall on the ice.——Dr. William H. Welch was the guest of honor at a banquet of the Nu Sigma Nu February 20, and had conferred on him the honorary degree of the fraternity.——Dr. Harry Adler recently fractured his forearm in an automobile accident.——Dr. H. H. Esker, chief resident physician of Bayview Asylum, has been seriously ill with septicemia, following an operation wound.

Journal Club Meeting.—The Book and Journal Club held its sixth annual meeting. February 23, when Dr. William H. Welch spoke on the club and its object and Charles L. Dana, New York City, read a paper on "Canticles of the Early Renaissance Anatomists." Dr. H. Barton Jacobs was re-elected president, and Dr. Joseph A. Chatard was elected secretary, vice Dr. W. Royal Stokes, who declined re-election. The object of the club is to provide new books for the library of the Medical and Chirurgical Faculty of Maryland.

MINNESOTA

Society Meetings.—The annual meeting of Red River Valley Medical Association was held in Crookston January 6, and the following officers were elected: President, Dr. Halvor Holte, Crookston; vice-president, Dr. Theodore Bratrud, Warren; secretary-treasurer, Dr. H. E. Nelson, Crookston; censors, Drs. Henry C. Stuhr, Argyle, Israel Lemieux, Red Lake Falls, and Charles H. Denniston, Crookston; delegate to the state society, Dr. Charles E. Dampier, Crookston, and alternate, Dr. George S. Wattam, Warren.——The annual meeting of the Southwestern Minnesota Medical Society was held in Pipestone, January 22. Dr. Alexander H. Brown, Pipestone, was elected president; Dr. Leon A. Williams, Slayton, vice-president; Dr. Emil King, Fulda, secretary-treasurer, and Dr. Alfred E. Spaulding. Luverne, censor (re-elected). In the evening Dr. Joseph N. McCormack delivered a lecture on "Health and How to Secure It."——Washington County Medical Society, at its annual meeting, held in Stillwater January 12, elected the following officers: President, Dr. Ernest E. Wells, Stillwater; vice-presidents, Dr. Wade R. Humphrey, Stillwater, first vice-president and delegate to the state association, secretary-treasurer, Dr. Frank G. Landeen, Stillwater; censor, Dr. Demeter Kalinoff. Stillwater. and alternate delegate to the state association. Dr. Edgar O'B. Freligh. Stillwater.——At the annual meeting of Ramsey County Medical Society, held in St. Paul January 25. it was announced that by reason of the sale of catgut prepared under the direction of the society, and the profit from the publication of the *St. Paul Medical Journal*, the building fund had reached $20,000. Dr. Arnold Schwyzer was elected president; Dr. Ethelbert F. Geer, vice-president; Dr. Frederick Leavitt, secretary-treasurer: and Dr. William Davis. member of the editing and publishing committee. all of St. Paul.——At the annual meeting of the Clay-Becker County Medical Society. held January 25. in Moorhead. Dr. William H. Aborn. Hawley. was elected president; Dr. Thrond S. Egge. Moorhead. vice-president; Dr. Edgar R. Barton. Frazee. secretary-treasurer; Dr. William J. Awty. Moorhead. delegate to the state society. and Dr. Frank H. Alexander. Barnesville. alternate.——At the annual meeting of the Park Region District and County Medical Society, held at Fergus Falls January 16. the following officers were elected: Dr. John A. Freeborn. Fergus Falls. president: Drs. Philip G. Cowing. Ashby. and A. Mason Randall. Underwood. vice-presidents; and Dr. Otto M. Haugan. Fergus Falls. secretary-treasurer.——The election of officers of the Upper Mississippi Medical Association. held in Brainerd January 12. resulted as follows: President. Dr. Oliver T. Batcheller. Brainerd; vice-president. Dr. Frank H. Knickerbocker. Staples. secretary. Dr. George H. Lowthain. Akeley. and treasurer. Dr. Paul E. Kenyon. Wadena.——Winona County Medical Society. at its annual meeting January 5, elected Dr. Charles P. Robbins president and delegate to the state medical society; Dr. George L. Gates. vice-president; Dr. Hugh F. McGaughey, secretary: Dr. Leland H. Munger. treasurer, all of Winona; Dr. Frederick H. Rollins. St. Charles, censor, and Dr. Hans M. Lichtenstein. Winona. alternate delegate to the state society.——The following officers were elected by Goodhue County Medical Society. at Red Wing. January 8: President and delegate to the state society. Dr. Hiram E. Conley. Cannon Falls; vice-president and alternate delegate. Dr. Frank W. Dimmitt, Red Wing; secretary-treasurer. Dr. Alonzo T. Conley. Cannon Falls: and censors. Drs. Alvah W. Jones and Myron W. Smith, Red Wing.——Dr. Adolph O. Bjelland. Mankato. has been elected president: Dr. Henry B. Grimes. Lake Crystal. vice-president; Dr. Thomas C. Kelly, Mankato. secretary: Dr. Lida Osborn. Mankato. treasurer; and Dr. John S. Holbrook. Mankato, censor, of the Blue Earth County Medical Society.

MISSOURI

Personal.—Drs. George F. Hamel. H. M. Roberson, R. H. Fox, and A. M. Fortney of the staff of the Missouri Pacific Hospital, Kansas City. have resigned.——Dr. William P. Cutler, Kansas City, has been appointed state dairy and food commissioner.

Academy of Medicine Organized.—A number of physicians of St. Joseph met February 3 and organized an academy of medicine on lines similar to societies of the same name in other cities. The following officers were elected: Dr. Jacob Geiger, president; Dr. Albert L. Gray, vice-president, and Dr. John M. Bell, secretary.

The Smallpox Situation in Liberty.—The smallpox situation in Liberty is much improved. Under date of February 22 it was reported that no new cases had been noted for two days; that 50 per cent. of the patients had been dismissed from quarantine, and that the schools, churches and William Jewell College were planning to reopen early in the week.

St. Louis

Physician Acquitted.—In the case of Dr. Charles O. Wright, charged by a mail carrier with obtaining money under false pretenses. Judge Fisher directed the jury to acquit the defendant, February 16.

Personal.—Dr. Edward C. Beck was badly bruised and cut in a street car accident February 11.——Dr. Lee H. Monroe, senior physician of the staff of the City Hospital, has resigned to become a member of the staff of the Missouri Pacific Hospital.

Medicolegal Society Formed.—The Medicolegal Society has adopted a constitution and by-laws and applied for incorporation. The following officers have been elected: President, A. N. Sager; vice-president, Prof. N. B. Carson; secretary, Dr. Henry J. Scherck, and treasurer. Loomis C. Johnson.

Recommendation of Publication Committee.—At a conference of the publication committee, the editor of the *Weekly Bulletin*, and section editors the following recommendations were adopted: That matter to appear in the *Bulletin* should be more promptly reported: that section editors shall be made assistant editors of the *Bulletin*: that section editors shall share with editors the duty of collecting news items of interest to the members of the society. and to the medical profession at large; and that such matter shall appear in the *Bulletin* as a regular feature.

NEW YORK

Investigation of the Milk Industry.—A bill has been introduced into the legislature providing for an appropriation of $20,000 with which to enable the agricultural commission to investigate the milk industry and its cost and care, especially in relation to the New York City milk supply from up state.

To Aid Incipient Consumptives.—A bill has been introduced into the legislature on the recommendation of the state fiscal supervisor to appropriate $175,000 for improvements at the State Hospital for the Treatment of Incipient Tuberculosis at Raybrook. The bill proposes to double the accommodations so as to make the hospital's minimum capacity 300 patients.

New York City

Harvey Society Lecture.—The ninth and last lecture of the Harvey Society lectures is by Dr. C. B. Davenport, director of the Institution for Experimental Evolution, Cold Springs Harbor, N. Y., March 6. at the Academy of Medicine, 17 West Forty-third street, on "Heredity in Man."

Operating Pavilion Opened.—The Gibb operating pavilion of the New York City Home for the Aged and Infirm on Blackwell's Island was opened on February 24. The building was named in honor of Dr. W. Travers Gibb. chief surgeon of the home. The cost of the building and equipment was $24,000. Dr. Gibb performed the first operation in the building on the following day.

Changes in the Ambulance Service.—The abandonment of the ambulance service of Roosevelt Hospital has necessitated a division of the territory covered by that service. The New York Hospital will cover the territory from Twenty-seventh street to Forty-second street. the Flower Hospital from Forty-second street to Seventy-sixth street, and the J. Hood Wright Hospital from Eighty-sixth street north.

Assignments of Gas Rebates.—Claims for gas rebates have been received in increasingly large numbers by the committee on the prevention of tuberculosis of the Charity Organization Society. The committee reports that auxiliary committees in every walk of life will be formed, and that the employés of each large factory and department store will be organized into groups in a concentrated effort to prevent tuberculosis.

Alumni Dinner.—The alumni of the College of Physicians and Surgeons of Columbia University celebrated the fiftieth anniversary of the founding of their association on March 2 by a dinner at Sherry's. Prof. Samuel W. Lambert, dean of the college and president of the association, presided. Among the speakers were Dr. Nicholas Murray Buttler. Dr. Seth Low. Dr. H. A. Christian of Harvard Medical School. Dr. William M. Polk of Cornell University Medical School, and Prof. John G. Curtis of the College of Physicians and Surgeons.

Sanitary Homes for Consumptives.—Mrs. W. K. Vanderbilt has purchased a site and has had plans prepared for the construction of three model tenements for poor consumptives which will cost $1.000.000. They will be located on East Seventy-seventh and Seventy-eighth streets and will be a valuable extension to the facilities of the tuberculosis clinic of the Presbyterian Hospital. There will be accommodations for from 375 to 400 families in comparatively inexpensive quarters and with surroundings especially favorable for consumptives. While the work has been undertaken in the interests of philanthropy it is estimated that the investment will yield a moderate return. All the rooms will open outdoors and there will be no dark halls, every apartment being entered from an outside stairway. The roof will be especially equipped and in fact all the advantages of a sanatorium will be supplied except that the families will provide their own food.

NORTH DAKOTA

Society Meetings.—At the annual meeting of the Northwestern District Medical Association. held in Minot January 19. the following officers were elected: President, Dr. Henry O. Windell. Williston; vice-president. Dr. E. M. Ramson, Minot; secretary-treasurer, Dr. R. W. Pence, Minot; censors, Drs. James O. Newlove. Minot. Josiah S. Davies, Granville, and Harry Ehernfeld. Anamose: delegate to the state society, Drs. Josiah S. Davies, Granville, and James D. Windell, Minot, and alternates, Drs. Thomas P. Martin, Towner, and Date K. Thyng, Willow City.——The Southern District Medical Society of North Dakota held its annual meeting January 29, at Monango. Dr. Ferdinand G. Benn, Kulm, was elected president; Dr. Bayard E. Ryder, Oakes, vice-president; Dr. Howard W. Barbour, Edgeley, secretary-treasurer; Dr. Gustav A. Mathews, Napoleon, censor, and Dr. George B. Ribble, LaMoure, delegate to the state society. The next meeting will be held at Kulm, May 4.——Stuttsman County Medical Association, at its annual meeting in Jamestown, elected Dr. Adolphus W. Gust, Jamestown, president; Dr. W. Albert Gerrish, Enderlin, vice-president; Dr. Miller, secretary-treasurer, and Dr. Helena K. Wink, Jamestown, trustee.

OHIO

Tuberculosis Hospital.—In compliance with the law recently enacted by the General Assembly, a tuberculosis hospital is to be established for Warren county, south of Lebanon, where an option has been secured on an eligible piece of property.

Personal.—Dr. Sherman Leach, Columbus, is seriously ill with septicemia due to an operation wound.——Dr. Frank J. J. Lehmann, Toledo, has been appointed assistant surgeon in the naval brigade.——Dr. Sterling B. Taylor has begun his work as health officer of Columbus.——Dr. H. F. Colby has been re-elected president; Dr. Elmer E. Kimmel has been elected treasurer; Dr. Alonzo H. Dunham, a member of the obstetric staff, and Dr. William E. Alleman, supervisor of anesthetics in the Miami Valley Hospital, Dayton.

Annual Report of the Registration Board.—The president of the State Board of Medical Registration and Examination, in his annual report to the governor, calls attention to the efforts of the board to exclude from the practice of medicine all persons morally and professionally unworthy. The state has effected reciprocity arangements with fifteen states. During the year 174 licenses were granted, and 34 from other states were recognized. Among those licensed were 6 osteopaths. Four certificates were revoked during the year: 13 midwives were licensed; 14 prosecutions were started, and 288 certificates of admission to medical colleges were issued.

Success in Prosecution of Evildoers.—Mark Klein, a druggist of Cleveland, charged on several counts with the illegal selling of cocain, is said to have pleaded guilty to all charges, waived proceedings in error, and offered to pay the fine of $500, throwing himself on the mercy of the court. The court accepted the plea of guilty and suspended the fine.——The governor and attorney general, January 28, declined to reverse the decision of the former governor and attorney general which upheld the State Board of Medical Registration and Examination in its revocation of the certificate of Dr. James A. Ambrose, Dayton, convicted of malpractice, and later pardoned by Governor Harris.——The suit brought at the instance of the Montgomery County Medical Society against Louis O. Black, Dayton, for practicing medicine without a license, is said to have been decided against the defendant, who was fined $25.

Cincinnati

The Eichberg Professorship.—A fund of $50,000, one-half the amount required, has been raised by professors of the University of Cincinnati to establish a chair of physiology in the university in memory of the late Dr. Joseph Eichberg.

Clinic Opened at Settlement.—At a meeting held February 1, at the University Settlement, it was announced that a general medical clinic would be opened in a short time, and later on a clinic for the treatment of diseases of the eye, ear, nose and throat. Dr. Frances M. Hollingshead is a member of the board of trustees of the settlement.

Personal.—Dr. Kenneth L. Weber has been appointed assistant physician at the State Hospital for the Insane, Athens. ——Dr. Julius H. Eichberg on February 23, had a cataract removed from his right eye, at St. Elizabeth's Hospital, Dayton. ——Dr. G. H. Astler, who was ordered to Santa Fe, N. M., for his health last November, is said to have taken a turn for the better and to be convalescent.

PENNSYLVANIA

Adulterated Drug Bill.—On February 25, the house health and sanitation committee reported out favorably on the Campbell drug bill, which is designed to prevent the manufacture and sale of adulterated or misbranded drugs. This measure is being pushed by the State Pharmaceutical board.

Physicians Support Medical Bill.—Four hundred physicians of Philadelphia visited Harrisburg March 2 and argued in favor of the proposed Shreve-Herbst medical bill, which was considered by the senate committee on health and sanitation. The delegation was reinforced by similar delegations from almost every town and city in the state.

For Poor Consumptives.—A bill was introduced in the House of Representatives by Representative Daniel J. Shern of Philadelphia, February 22, carrying an appropriation of $1,000,000, for two years, to encourage all hospitals to devote attention to tuberculosis patients. The bill provides that all hospitals having beds for persons afflicted with tuberculosis, shall be entitled to receive one dollar per day from the state for each bed so maintained, the payment to be made on the approval of the auditor general. This measure, it is said, has the approval of the governor.

Rights of a Patient.—Judge Swartz has handed down an opinion of interest in a suit brought by Dr. William J. Ashenfelter of Pottstown, against a patient for $100 for services alleged to have been rendered. The claim was disallowed. The patient was taken to the hospital after being seriously injured in a railroad accident. Dr. Ashenfelter was the surgeon in charge at the time and as such he amputated a limb. The patient arranged with the hospital authorities for a private room and it was agreed that the compensation for care, nursing and medical attention should be $10 a week. The court said without notice of some kind the patient had a right to assume that he was paying for all the services he received when he paid the sum due under his contract to the hospital. If he had secured the services of a surgeon not on the hospital staff, a different question would arise.

Philadelphia

Beriberi at Quarantine.—The steamship *St. Helena* was placed under quarantine by the Board of Health at Point Breeze, February 27. The cause of this action was due to the death of a Chinese sailor, who is supposed to have suffered from beriberi.

Tuberculosis Exhibition.—The International Tuberculosis Exhibition is being visited by great concourses of people daily, The average daily attendance exceeds more than 10,000 and the total number of visits made since the exhibition opened two weeks ago aggregates 151,095.

Anonymous Gift for University.—At the university day exercises, February 22, Provost C. C. Harrison made the announcement that an anonymous gift of $200,000 had been made to the medical department. It was stated that this sum was secured through the efforts of Dr. John H. Musser, professor of clinical medicine and that the money is to be used to endow a department of research in medicine.

TENNESSEE

Dr. Happel Goes to Baltimore for Treatment.—Dr. T. J. Happel, Trenton, member of the Board of Trustees of the American Medical Association and secretary of the State Board of Medical Examiners, who has been suffering more or less at intervals from an obstinate nervous affection, is in Baltimore for treatment.

VIRGINIA

Sanatorium Reorganized.—Ironville Tuberculosis Sanatorium has been reorganized and put in charge of Dr. Walter F. Wood, former superintendent of the White Haven (Pa.) Sanatorium.

Wells Must Be Closed.—The health department of Richmond has secured a verdict in its favor in a test case in virtue of which more than 400 wells of the city which are said to be a constant menace to public health, will be condemned and filled.

Lynchburg Gets Epileptic Colony.—The State Hospital Board has decided to purchase an estate in Amherst county opposite Lynchburg, as a site for the proposed State Epileptic Colony, and to recommend the sale of the property devised to the colony by the late Mr. Murkland. There are 1,000 acres in the tract, of which 184 are bottom land, 316 pasture, and the remainder original and second growth timber. The buildings already on the property are a thirteen-room brick building, a four-room brick cottage, granary and stables, twenty-three frame cottages and other buildings.

GENERAL

To Study Alcohol and Narcotics.—The American Society for the Study of Alcohol and Other Narcotics, which was organized in 1870, will hold its annual meeting at the Raleigh Hotel, Washington, D. C., March 17-19. Dr. T. D. Crothers, Hartford, Conn., is secretary of the society, and a general invitation is extended by him to all persons interested.

Railway Surgeons Elect.—At the annual meeting of the Association of Surgeons of the Illinois Central Railway, held in Memphis, Dr. John E. Owens, Chicago, was re-elected president, Dr. William F. Grinstead, Cairo, was elected first vice-president, Dr. William B. Rogers, Memphis, Tenn., second vice-president, and Dr. Charles B. Fry, Mattoon, secretary-treasurer.

First Graduates at Manila.—The first class of physicians turned out under the American rule was graduated from the Philippine Medical School, Manila, February 27. Dr. P. C. Freer, dean of the faculty of the college, presided and addresses were delivered by Commissioners D. C. Worcester and Newton W. Gilbert, and Rafael Palma, a member of the Philippine assembly.

Society Meeting.—The Tri-State Medical Association of the Carolinas and Virginia held its annual meeting in Charleston, S. C., February 16 and 17. The following officers were elected: President, Dr. Joseph A. White, Richmond, Va.; vice-presidents, Drs. Le Grand Guerry, Columbia, S. C.; J. Wilkinson Jervey, Greenville, S. C., and William W. McKenzie, Salisbury, N. C., and secretary-treasurer, Dr. P. Howell Way, Waynesville, N. C. The next meeting of the society will be held in Richmond.

Smallpox in Central America.—Drs. Aurelio A. Dutari and C. A. Hearne recently made an investigation of the smallpox condition in the province of San Carlos, Panama. They found 18 cases of variola, benign in character and with no mortality. They state that the disease is practically endemic several miles from the coast in both the San Carlos and Chamo districts.——Dispatches from New Orleans papers allege that 12,000 cases of smallpox are reported in Guatemala City and its environs.——Smallpox is reported to be epidemic at Quintana Rio, at Teran, Nueva Leon and Jalapa, Mexico.

Fenger Memorial Fund.—The council of the Chicago Medical Society on May 8, 1906, provided for the incorporation of an association in memory of Dr. Charles Fenger, to secure a fund by voluntary contributions of individuals, to be safely invested, and the income to be devoted to medical research. The fund now contains a little more than $7,000. Payment of $25 entitles to active membership in the Association and $10 to associate membership. The treasurer of the fund, Dr. Coleman G. Buford, 100 State street, is sending a circular letter to physicians in northern Illinois, Wisconsin, Michigan, Indiana, and Iowa, which will, it is hoped, increase the interest of the profession in general in the praiseworthy work undertaken by the association.

FOREIGN

Norwegian Medical Association.—The thirteenth congress of the national medical association of Norway is to be held this year at Bergen in the second week of August, just before the International Leprosy Congress, which is announced for August 15 to 19 at the same place.

The Tolstoi Prize.—The Russian Academy of Sciences has awarded a prize of 1,000 rubles ($510) endowed by Count D. Tolstoi to Dr. J. Sawadskij for his recent research on the "Inhibition and Suspension of the Conditional Reflexes." His work was done in Pawlow's laboratory.

Hungarian Medical Press Association.—The medical journals of Hungary have united in a national association now affiliated with the International Press Association. Professor Lenhossek is the president of the national organization, which is modeled after the German Press Association.

International Antiquackery Association.—The Netherlands national association against quackery has assumed the office of being the central station for the international antiquackery movement, bearing the expenses connected therewith. It has also affiliated with the central office of the society for repression of the illegal practice of medicine, whose secretary is Dr. Levassort, 2 Place des Vosges, Paris. All these organizations are busily at work preparing for the International Antiquackery Congress at Paris next year.

The Health of Rio de Janeiro in 1907.—The official statistics state that the mortality was 20.76, the natality 25.1, and the marriages 5.77 per thousand for a population of 636,018. There were 39 deaths from yellow fever and 73 from bubonic plague in 172 cases of the latter received in the hospital. The morbidity was still further reduced in 1908. The stamping out of yellow fever is the triumph of the local authorities, and the *Brazil Medico* is collecting subscriptions for a gold medal to be presented to Oswaldo Cruz, the chief of the board of public health, to whose energy is attributed the eradication of yellow fever.

The German Congress for Internal Medicine.—The twenty-sixth congress for internal medicine is to be held at Wiesbaden, April 19-22, with Professor Schultze, of Bonn, in the chair. Among the questions to be discussed are "Mineral Metabolism in Clinical Pathology," "Therapeutic Deprivation of Salt," and "Tests of the Sensory Functions," the latter to be presented by Head of London. The secretary is Dr. E. Pfeiffer, Parkstrasse 13, Wiesbaden. There will also be an exhibition in connection with the congress. The date is arranged to follow the surgical congress at Berlin.

Censor for Medical Advertising.—The authorities in Russia have organized a censorship for medical advertising, including both proprietaries, apparatus, drugs, hygienic and cosmetic remedies and the professional cards of physicians, dentists, midwives, masseurs and druggists, health resorts and mineral waters. Every advertisement of this kind must be submitted to the censor before publication, and no anticonceptional remedies and apparatus are allowed to be advertised at all. Exaggerated claims will not be permitted nor proprietaries with names suggesting the affection for which they are advocated, like "eczematin," etc. An autocratic government may possibly have some good features after all.

German Congress for Urology.—In addition to the Roentgen, Orthopedic and Surgical congresses to be held at Berlin in turn between April 13 and 17, the second congress of the German Urological Society will follow close on these gatherings, opening April 18 and continuing for four days. The first addresses are to be on the subject, "Urology and Gynecology," to be presented by Stoeckel of Marburg and Wertheim of Vienna. Next follow addresses by von Fritsch of Vienna and Barth of Danzig on "Suppurative, Non-tuberculous Affections of the Kidneys," and by Casper of Berlin and Zuckerkandl of Vienna on "Bladder Tumors." An exhibit of urologic appliances, etc., is to be a feature of the congress. For further particulars address the secretary, Dr. Wossidlo, Victoriastr. 19, Berlin W.

LONDON LETTER

(From Our Regular Correspondent)

London, Feb. 20, 1909.

Bernard Shaw on Physicians: Socialistic Criticism of the Profession

Mr. Bernard Shaw is always original, and though he revels in the paradox and finds our most cherished institutions only subjects for his satire, he has to be taken seriously. Amid his extravagant and socialistic views will often be found sound criticism. At the Medico-Legal Society he opened a discussion on the "Socialist Criticism of the Medical Profession." He said that the physician at the present day had practically been driven into the position of a private tradesman. The medical profession had never accepted that position as a matter of theory, but its members had been forced into it as a matter of fact. The average physician was abjectly poor as the result of competition. The attitude of socialism toward a poor man was that he was a bad and dangerous person, and when the physician was poor he was particularly dangerous. It was not possible for him to carry out those hygienic measures which he knew to be necessary, and he had to pander to the foibles and ignorance of patients so as not to lose them. The ordinary patient demanded cheap cures, and to gratify him the physician had to perpetrate a swindle. The medical profession must be socialized because physicians were more and more driven to claim powers over the liberty of the ordinary man which could not possibly be entrusted to any private body. If there was to be compulsory hygiene and the people were to be compelled to do this, that and the other for the health of the community, there must be democratic control, otherwise it would become an intolerable tyranny. No doubt there would be private practitioners even after the physician had been placed in the position of public officer of health. Both the physician and the patient would always have the alternative of being delivered over to the tender mercies of private enterprise. But if the physician found the position of having to depend on the caprice and ignorance of private persons intolerable, he would, under socialism, get into an independent position in the public service.

In the discussion which followed, Sir Victor Horsley said that it was reserved for the British Medical Association in 1909 to attempt to organize their profession to ensure that the practitioner should obtain a living wage. He had no shame in being called a tradesman. He sold his knowledge and in that respect he was a tradesman, he supposed. He hoped that he was an honorable tradesman, and he believed that the appanage of honorable conduct stamped him as a professional man. Mr. Shaw had told them that by nationalizing the profession the physician would be put in a more honorable position and that the public would be assured of better treatment. He believed that most firmly with Mr. Shaw. All that they had to do was to see that the profession did not lose by the transformation.

Proposed Medical Library Association

At a meeting held at Leeds it has been decided to form an Association of Medical Libraries, and a provisional committee was appointed to draw up a constitution and rules. Professor Osler was appointed first president and Prof. Walker Hall and Mr. E. A. Clayton, librarian of the Manchester Medical Society, temporary secretaries. The project is an entirely new departure in this country, as no co-ordination has ever existed between medical libraries.

Irish and Scotch Diplomates and English Hospital Appointments

At most of the great English hospitals there is a rule requiring candidates for appointment as surgeons to possess the fellowship of the Royal College of Surgeons of England, and for the appointment as physicians the membership of the Royal College of Physicians. The object is to ensure that candidates have the highest qualifications possible, and no difficulty exists in obtaining candidates with these qualifications. In England a large number of Irishmen and Scotchmen practice under the diplomas of their respective countries and for long they have proclaimed that it is a grievance and even an injustice that they should be excluded from competition for English hospital appointments. On three occasions the British Medical Association has passed a resolution condemning the system, but nothing has ever resulted. A meeting has been held in London of Irish and Scotch diplomates, at which the presidents of the Royal Colleges of Physicians and Surgeons in Ireland attended, to discuss the subject. The speakers alleged that the English colleges possessed an unfair monopoly in the hospital appointments, and that the qualifications of the Irish and Scotch colleges were just as good and obtained by just as stringent examinations. This last statement will not receive general acceptance. It is generally believed that the fellowship of the Royal College of Surgeons of England is the first surgical diploma in the world, and with good reason. When English hospital committees insist on candidates possessing it they are not acting in any spirit of national prejudice, but merely demanding that candidates shall possess the highest qualification obtainable. It is perfectly open to Irishmen and Scotchmen in England who desire to become hospital surgeons to obtain this diploma if they possess the requisite knowledge, and many of them do possess it and have been appointed on the staffs of English hospitals. Indeed, with their usual enterprise the Scotch have obtained such positions out of all proportion to their number.

British Medical Benevolent Fund

Seventy-three years ago there was founded a very useful institution, the British Medical Benevolent Fund, for the object of relieving physicians and their families under severe and urgent distress caused by sickness, accident or other calamity. It was not intended to be a provident or benefit society, but a charitable institution open to every one, the only qualification being poverty and distress. The persons who come for relief are divided into two classes. Those whose distress is temporary are relieved by grants of money, and those whose distress is permanent through ill health or old age are made annuitants. The grants of money are made to distressed physicians, their widows and orphans, and the annuities are provided for such as have reached the age of 60. The number of annuitants last year was 124 and the sum distributed amounted to $12,000. The value of each annuity is $100 and in some cases $130. The money for these annuities is obtained from investments. On the other hand, grants varying from $25 to $100 are made from donations and subscriptions. Last year over $10,000 was thus distributed, but, unfortunately, this sum fell short of relieving many urgent cases. Addressing the annual meeting of the fund, the Bishop of Oxford claimed a certain right to speak, as his father (the late Sir James Paget) was for many years its president. He said there was a clear and urgent need for such an institution. There was no profession in which a man was compelled, without any choice of his own, to run greater risk of impoverishment for himself and his family than in the medical. By the time a man qualified he had spent a large sum, and from the very first his outlay was considerable for the keeping up of appearances. After that everything depended on his health, without which his other assets, such as education and skill, were useless.

The Oldest Woman Physician in England

The oldest woman physician in England and the first woman to take a medical qualification and be placed on the medical register, Dr. Elizabeth Blackwell, has celebrated her eighty-eighth birthday at Hastings. She received numerous congratulations on the event from all parts of England and America. Born in Bristol, her life epitomises the long struggle of women for admission into the medical profession in this country. Her inspiration for the revolution she wrought in breaking down one of the strongest prejudices in this very conservative country was probably largely derived from her American training. As long ago as 1832 her family went to America, where she became a school teacher. She began her preliminary studies in Asheville, North Carolina, in 1845. She had some difficulty in entering a medical school, as the universities of Philadelphia and of New York refused to consider her application. At Geneva, New York, she was more fortunate and one of her most valued possessions is the copy of the resolution passed in October, 1847, when it was unanimously agreed: "That one of the radical principles of a republican government is the universal education of both sexes; that in every branch of scientific education the door should be open equally to all, that the application of Elizabeth Blackwell to become a member of our class meets our entire approval." She pursued her studies undisturbed, but was regarded with curiosity by her fellow students and the townspeople. On Jan. 25, 1849, she was graduated. She returned to Philadelphia and began to practice in the hospital wards of the Blockley Almshouses. To gain further experience she came to Europe and spent some months in La Maternité, Paris, and then came to London, where she obtained from the late Sir James Paget the valued privilege of studying in the wards of St. Bartholomew's hospital. In 1859 Dr. Blackwell was the first woman whose name was placed on the British Medical Register.

PARIS LETTER

(From Our Regular Correspondent)

Paris, Feb. 18, 1909.

The Causes of Death in France

Until recently France lacked mortality statistics except for the cities, and even these date only from 1886. M. Mirman, director of the *Assistance Publique* and public hygiene, recently ordered the statistics to be compiled for the whole of France, and the results have just been published. There were in 1906, with a population of 39,252,245, a total of 778,400 deaths, of which 354,667 occurred after 60 years of age, and 199,237 in the first year of life. Senile debility is assigned the principal rôle, being given as the cause of 103,374 deaths. Next come inflammatory affections of the respiratory apparatus (pneumonia, bronchitis, etc.). These are responsible for 99,839 deaths, almost as many as senile debility. It is, moreover, almost exclusively among old people and young children that the respiratory affections produce fatal results. Then follows tuberculosis (phthisis and other tuberculous conditions) which caused 87,091 deaths. Although this figure is somewhat below the truth, we are, it appears, nevertheless far enough removed from the pessimistic assertion which has been repeated for some years, that tuberculosis causes in France 150,000 deaths per annum! The comparative statistics arranged by Dr. Jacques Bertillon, chief of the Paris department of statistics, show clearly that in so far as the mortality from tuberculosis is concerned, the situation in France compares favorably with that of other European countries. Here is a table of deaths, per 100,000 inhabitants, from tuberculosis yearly during the period from 1895 to 1900.

Austria	340	Scotland	234
Hungary	328	Wurtemberg	230
Bavaria	292	Saxony	221
Ireland	282	France (1906)	221
Baden	274	Denmark	216
Finland	272	Prussia	208
Norway	249	England	190
Belgium	248	Italy	171
Switzerland	246		

It is thus seen that France follows almost immediately after Italy and England, countries extremely favored in regard to tuberculosis, England by its wealth and Italy by its marvelous climate.

But if France as a whole is relatively favored in this respect, it must be admitted that Paris, of all the great capitals, is the one in which tuberculosis is most prevalent (458 deaths per 100.000 inhabitants during the past year) and in which it is being most slowly reduced.

Beside the three great causes of death—senility, inflammatory conditions of the respiratory apparatus, and tuberculosis—which furnish each about 100.000 deaths, there are three others which are one-half as fatal, namely: organic heart diseases, with 49.989 deaths; cerebral hemorrhage and its sequelæ with 47.466 deaths; infantile diarrhea with 41.699 deaths. In a third group must be classed three other causes of death which are responsible for about one-half the number of deaths as the preceding causes. These are: Cancer, with 27.306 deaths; congenital debility, which has carried off 24.421 new-born infants; and violence (including suicide), which has caused the death of 26.259 persons.

In comparison with these nine principal causes of death, the others count for very little. Typhoid fever, for instance, caused only 5.453 deaths; measles, whooping cough, and diphtheria have claimed each a little over 3,000 victims; scarlet fever only 907.

A Day of Rest for Physicians

For some time various medical organizations have been studying measures for securing a weekly day of rest for the physician, but by reason of the practical difficulties that the question entails, their efforts have up to now been limited to the simple expression of wishes and to theoretical discussion. At last one of these organizations—the syndical section of the xvii arrondissement of Paris—has proved that the difficulties are not insurmountable. It has in short succeeded in organizing a roster of medical service, called the service of weekly rest, which leaves physicians free, while it respects the interests of patients by assuring them of such urgent attendance as they may need. This service is established on the following basis: The arrondissement or ward is divided into four districts and a list is made up in advance for as many Sundays or holidays as there are members of the *syndicate* in that district. The order of service is made by ballot for the first Sunday and for the following days in alphabetical order. The list of turns of service is placarded at the *mairie* and in the police stations of the ward, where it can be consulted by the public. Those applying at a physician's house are given a printed card headed with the title of the medical organization, with the date and the name and address of the physician taking the service for the day. The card also bears the legend that fees are to be paid in cash, and this is enforced as far as possible. If the physician on duty, summoned to a patient of a colleague in the syndicate, finds himself confronted by some surgical or obstetrical emergency, his fees are regulated by an amicable understanding with the interested colleague. The manner in which the physician interested shall be advised next day of the visit made to his patient is not decided; the medical organization has not thought it necessary to touch on this question in the regulations, feeling satisfied of the fraternal scrupulousness that will induce the physician on duty to write to his colleague as early as possible.

The Paris Medical Society

The three oldest medical associations in Paris, the Medical Society, the Medico-Chirurgical Society, and the Society of Practical Medicine and Surgery, have recently combined under the name of the "Société de Médecine de Paris." This new association held a special meeting February 3 to celebrate simultaneously its own inauguration and the centenary of the Society of Practical Medicine and Surgery, the youngest of the three amalgamated societies. M. Doumergue, minister of public instruction, presided. With him on the platform were the dean of the medical college, the chief of the university system, and many other leading men in the world of medicine.

The P. C. N.

In France the study of medicine is preceded by a preparatory year devoted to the obtaining of a certificate of physical, chemical and natural studies—the P. C. N. Those students who at present are preparing for this certificate are not affected by a recent decree to which I referred in one of my preceding letters (THE JOURNAL, Jan. 9, 1909, p. 145), reorganizing the medical studies properly so called, and fixing their duration at five years in place of four. It is officially stated that the new decree is not yet enforced, and probably will not be applied for two years, on account of the details of organization and finances.

The Sanitary Condition of Martinique

The minister of colonies has received from the governor of Martinique a cablegram announcing that the sanitary condition is satisfactory, and that the officials will be authorized to come down from the hill resorts by February 21. The measures of isolation and of night surveillance will be dispensed with for ships in the bay, but not for the steamboats of the Transatlantic Company, which are not yet authorized to come up alongside the quay.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Feb. 11, 1909.

The Call of Professor Minkowski to Breslau

Professor Minkowski of Greifswald has been called to fill the chair of internal medicine at Breslau left vacant by the transfer of Professor Strümpell to Vienna. Minkowski is well known for his work in the field of experimental pathology and for his researches on pancreatic diabetes in conjunction with von Mering. We had the opportunity to learn how excellent a lecturer Minkowski is on the occasion of a postgraduate course delivered in the Kaiserin Friedrich Haus, to which a number of distinguished foreign teachers were invited. It may well be assumed therefore that Minkowski will fill Strümpell's place satisfactorily. As I am informed, Minkowski himself is well pleased at the change since he was not well satisfied with the little university of Greifswald in Vorpommern. When he was called there three years ago he hailed the call with pleasure as a fulfillment of his long cherished wish to become a full professor. In spite of his worth and of his ambition, which was supported by his former teacher, the distinguished Professor Naunyn, he remained a long time in Strassburg as an assistant. The opinion has long prevailed that he was neglected by the faculties on account of his Jewish faith, and this idea was confirmed by what happened on his selection for the position at Greifswald. He went from Strassburg to Cologne as director of the medical department of the general hospital. On his removal to Greifswald he changed his religion, and the assumption is probably justified that this change had been made a condition of his appointment. According to the newspapers, Professor Pfeiffer from Königsberg, has already been chosen to succeed Flügge as future director of the hygienic institute at Breslau.

A German Radium Institute

The desire for a German institute for the investigation of radium is to be fulfilled sooner than we expected. A foreign philanthropist has donated the sum of 130,000 marks ($32,500) to the university of Heidelberg to found a radiologic institute. The institute is to be combined with the new building of the physical institute under the title of physico-radiologic institute, which will be under the direction of Lenard, the professor of physics, and will include in its scope not only biologic but also medical investigations carried on in connection with the clinics.

A German Central Committee for Care of School Children's Teeth

Early in February a meeting was held at the Kultusministerium (state department of education) at which a committee was formed to provide for dental treatment in the public schools and to promote the rational care of the teeth. The committee is to carry out its purpose by popular addresses and by the distribution of suitable literature on the care of the teeth as well as by introducing instruction on this subject into the schools. It seems to me that the school physicians and the dentists that have been appointed for many of the schools are fully able to carry out the work assigned to this committee. But the tendency to form committees with high-sounding names and ambitious plans is nearly as great with us as the disposition to organize societies. It is easier now than it used to be to get a reputation as a philanthropist. One needs only a humanitarian idea, and it is easy to get a few prominent men to help form a committee and then to make an appeal and bombard the papers with the new undertaking. To-day much money, time and strength are being squandered under the battle-cry of humanity and philanthropy.

Woman's Hospital for Greater Berlin

Berlin has only one policlinic and private clinic conducted by women physicians, and there is as yet no large hospital under their charge. This alleged defect is now to be remedied; money for such a hospital has been collected among the women of Berlin. While it is yet uncertain whether the enterprise will be carried out, I think it probably will. There is sufficient enthusiasm among the leaders of the woman movement to set the mass of their followers in motion, and there are enough well-to-do women who can and will make sacrifices for the realization of this idea.

Hygienic Regulations for Working Women and Youths

At the end of last year a law was promulgated which ensures the following hygienic conditions: After the end of the day's work an uninterrupted rest period of at least 11 hours must be allowed youthful laborers and workwomen. Working women must not work longer than ten hours and must not be employed at night, from 8 p. m. till 6 a. m. Women must not be employed for a period of eight weeks at the time of confinement, and at least six weeks of this rest must follow the delivery. Women must not be employed in coke works nor in the transportation of building materials. Besides these restrictions, the federal council (Bundesrat) can forbid the employment of youths and women in any industry that is especially dangerous to health or morals.

Monument for Professor Mendel

A memorial to the distinguished nerve specialist and psychiatrist, Professor Mendel, is to be erected in Pankow, a suburb of Berlin, where he long resided. There is no doubt that sufficient contributions for a suitable monument can be collected, as Mendel was much beloved by his colleagues as well as by his numerous clientele.

Foreign Red Cross Medals

A swindle similar, but not quite so bad as the bogus Academia Fisico-chimica at Palermo which I have previously mentioned, is the fraud carried on in connection with the Japanese Red Cross medals. The impression was produced by advertisements of commercial agents that these medals were an official distinction, similar to the German Red Cross medals which are bestowed exclusively by the king. In reality, the Japanese society is a private institution which distributes membership medals and medals for merit on the payment of 25, 200, or 1,000 yen (equivalent to $12.50, $100 or $500). Any one can obtain membership and a medal on the payment of the requisite contribution. The middlemen, of course, charge higher rates for obtaining the medals for their customers.

The Cholera in Russia

According to information given out by the Prussian government, the number of people who have been attacked with cholera since the beginning of the epidemic amounts to 30,157, of whom 14.253 died (about 50 per cent.). In St. Petersburg alone, 8,763 were attacked and 3.553 died.

Annual Report of the Great Hanseatic Insurance Society

The annual report of the "Landes-Versicherungs-Anstalt der Hansestädte" for the year 1907 is at hand. Since 1891 the society has expended over 7.000.000 marks for medical purposes and more than 900.000 in 1907, over half of which was paid out on account of tuberculosis. This society embraces Hamburg, Bremen and Lübeck.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, Feb. 13, 1909.

Number of Physicians in Austria

The number of medical practitioners in Austria (in a population of 27,000.000) was 12.278 in 1908, according to official figures; that is, one practitioner for about 2.250 inhabitants—a fairly satisfactory ratio. The increase over 1907 was 2 per cent., which corresponds to the estimated increase in population of 2 per cent. per annum. Although the German-speaking population is only 39 per cent. of the whole, 60 per cent. of the practitioners work among Germans because of their superior social and financial position. The proportion of medical men to the population in Austrian cities varies between 1 to 560 in Prague, 1 to 700 in Vienna, which has nearly 3.000 practitioners for 2.000,000 population, 1 to 1.600 in Graz, and 1 to 1,500 in Zara. All practitioners except a few who have been in practice for a long time have the degree of M.D.; for thirty years this degree has been required of those seeking to practice.

The number of medical graduations corresponds to the number of students. The numbers of both have decreased considerably since 1894, when the seven Austrian universities were attended by 6,739 medical students, against 2.440 in 1909. In 1894, 1.088 degrees of M.D. were granted in Austria; in 1904 only 553. In the University of Vienna alone there were 323 degrees of M.D. granted in 1900; in 1908, only 157. At present, since the number of students and graduations corresponds to the annual increase in population, the prospects for medical men are not bad, especially in the country, where wealth is increasing and education becoming diffused.

Jubilee of Prof. von Eiselsberg

The present and former assistants and students of the director of the first surgical clinic in the Vienna General Hospital, Prof. von Eiselsberg, recently celebrated the twenty-fifth anniversary of his attaining the degree of M.D. A number of special scientific papers, prepared by the assistants of the professor and worked out during his professorship, were presented to him in the form of a *Festschrift*.

Lack of Antidiphtheritic Serum Due to Insufficient Stable-Room

In a report of the bureau of health attention was directed to the fact that the amount of antidiphtheritic serum was not sufficient to meet the demands of a possible epidemic. This report caused attacks on the management of the institute to be made by members of the city and national government. Professor Paltauf was then authorized to give the following explanation: Owing to the limited extent of the stabling available for the serum horses, not more than twenty animals can be kept for this purpose by the institute. Not all these animals are capable of providing a good quality and sufficient quantity of the serum. Professor Paltauf prefers the weaker serum, because he has found it less dangerous and capable of being administered to better advantage. The only solution of the difficulty would be to keep at least forty horses to select from. As the manufacture of serum is not permitted here to private enterprise, the government has to provide the funds, and bureaucratic red tape stands in the way. At all events, the supply of serum is at present sufficient for at least 600 cases per week for some time. It is expected that public interest and discussion will make the official machine work more rapidly.

Investigations Into Child Labor

The report of the inspector of factories contains some interesting facts in regard to the employment of children under 14 years of age. Of the 400.000 children in lower Austria, fully 10 per cent. are wage-earners; of these 45 per cent. are boys and 55 per cent. girls. As regards the nature of the work, 30 per cent. of the children are employed in domestic work, 15 per cent. in agricultural labor, and 22 per cent. in both kinds. Industrial concerns, chiefly textile factories and the stone, glass, leather, hair, clothing and millinery trades employ 12 per cent., and public-houses and hotels employ some. The wages paid are very low, varying between half a dollar a week or less and $2 a week. The most notable fact is that sometimes even children of 6 or 7 years are employed, a fact which must have an unfavorable influence on the growth and education of the children.

Correspondence

Mold for Carbon Dioxid Snow

To the Editor:—Dr. Sutton's paper in The Journal of Feb. 6, 1909, describing a mold for carbon dioxid snow, prompts me to call attention to a simple method of obtaining a similar result. For several months I have been using the cylinder of an old hypodermic syringe, end caps removed for the same purpose. The end of the metal container for the glass cylinder fits loosely within the nozzle of the CO_2 drum. A ring of rubber tubing, ⅛ inch wide, is slipped over the end of the syringe cylinder, making it fit snugly into the nozzle.

The other end is loosely plugged with cotton, the chamois wrapped over, and the whole held with a wooden clamp to prevent the hand from being frost-bitten. The gas is turned on lightly, frost forms on the glass cylinder, then a column of "snow" rapidly fills it from distal end downward. The cotton in the end prevents too rapid passage of gas. Entire closure would cause reverse pressure, a leak at the nozzle end, and no "snow" would form. The chamois is now wrapped around the cylinder for protection of the fingers, the cotton is removed and the column of "snow" (molded to fine point with finger and thumb if needed) is pushed down with the syringe piston onto the area to be treated. For large areas a hollow wooden cylinder ½ inch to 1 inch in diameter and one inch long is set close on the nozzle of the drum, the junction being made with adhesive plaster and the open end closed with cotton and wrapped with chamois skin. "Snow" is obtained quickly and can be pressed down, using a round bottle of the proper size or a piece of wood as a piston.

Marked simplicity over other methods justifies its publication. M. B. Hutchins, M.D., Atlanta, Ga.

"Mrs. Potter's Pure Walnut-Juice Hair-Dye"—Another Case of Poisoning

To the Editor:—You may be interested to hear that "Mrs. Potter's Pure Walnut-Juice Hair-Dye" is as effective in Boston as in Omaha. About two weeks ago, by courtesy of Dr. J. T. Sherman, of Dorchester, I saw an elderly woman who presented exactly the same picture as Dr. Schalek's patient, described in The Journal, Feb. 13, 1909, page 557. She stated that this was her second attack, she having been cured of the first about four weeks before at a hospital in the neighborhood of Boston. Her hair had obviously been dyed, and, when questioned, she produced the original bottle, saying that it was to her a new preparation and had been highly recommended. Each of her attacks followed the application of the dye and each responded promptly to treatment. Williston W. Barker, Dorchester, Mass.

Benzoate of Soda

To the Editor:—I feel that your editorial on the question of benzoate of soda was timely and well taken. It seems to me that a test of small doses of this drug on healthy men, under hygienic surroundings, with all facilities for recreation and diversion, means little. It will not be the healthy people in good surroundings who will consume canned goods, but most frequently men, women and children in isolated localities who are wholly dependent on such forms of food, and from the latter circumstance alone it very frequently happens that one has to deal with an appetite and digestion that is not up to the standard. Harper Peddecord, St. Paul, Minn.

Queries and Minor Notes

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

FREEZING DOES NOT PURIFY ICE

To the Editor:—Please cite authorities, or reports from cities that have investigated the question, showing that freezing does not purify ice. J. H. Mackay, M.D., Norfolk, Neb.

Answer.—That ice may contain a considerable variety of living and virulent bacteria has been shown by a number of researches. Notter (Treatise on Hygiene, 2d ed., p. 11) refers to investigations made by the State Board of Health of Massachusetts which showed that "there were 81 per cent. as many bacteria in the snow ice as in the waters; 10 per cent, as many in all other ice, and 2 per cent. as many in the clear ice as in the waters. It is therefore much safer to use for drinking water, and for placing in contact with food, that portion of the ice which is clear.

P. Sacerdote (Composition of Ice, *Presse Medicale*, xiv, No. 36; abstracted in The Journal, Sept. 8, 1906, p. 813) found that whatever the character of the water used, the water obtained by melting the outer clear parts is almost perfectly pure, while that from the central opaque part contains the impurities. The bacteria do not escape this law, he adds, but will be found congregated in the central part of the cake of ice. Park states that, according to the investigation of Dr. North, the bottom ice, the last to be frozen, contained but 2 per cent. of the number of bacteria in the water.

Harrington cites a case in which a number of French lieutenants developed typhoid from drinking champagne cup made with polluted ice. Most authors, however, agree that the danger of the communication of typhoid by ice is slight.

The State Board of Massachusetts, in its report concerning the bacterial content of the domestic supply, states: "In not one instance of the still freezing of ordinarily polluted water . . . have we been able to find *B. coli.*" (Report for 1900.) W. H. Park found no bacilli living at the end of 22 weeks in ice frozen from water containing before freezing 2,560,410 typhoid bacilli per cubic centimeter. At the end of five weeks only 0.1 per cent. of the bacteria were living.

We may conclude then that while infection from recently frozen, polluted ice may occur, it is not likely to do so if the ice is clear and has been frozen for a long time.

The following references may be consulted:

Fränkel, Ueber den Bakteriengehalt des Eises, *Zeitsch. f. Hygiene*, I.
Prudden: Bacteria in Ice, *Medical Record,* New York, Mar. 26 and Apr. 2, 1887.
Sedgwick and Winslow: Abstract in *Revue Scientifique,* April 28, 1900.
Park, W. H.: *Jour. Boston Society of Med. Sci.*, iv, p. 213.
Hill, H. W.: *Boston Medical and Surgical Journal,* Nov. 21, 1901.
Notter, J. L.: Ice and Snow Water, "Treatise on Hygiene," 2d ed., p. 11.
Harrington, C.: "Practical Hygiene," 2d ed., p. 393.
Park, W. H.: The Importance of Ice in the Production of Typhoid Fever, "Pathogenic Bacteria and Protozoa," 3d ed., p. 306.
Park, W. H.: The Importance of Ice in the Production of Typhoid Fever, The Journal, Aug. 31, 1907, p. 731.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending Feb. 27, 1909:

Reynolds, F. P., major, ordered to St. Paul, Minn., for temporary duty as chief surgeon.

Miller, E. W., capt., granted leave of absence for two months.

McIntyre, H. B., lieut., granted an extension of one month to his leave of absence.

Edie, G. L., lieut.-col., relieved from treatment at Hot Springs, Ark., and ordered to return to his proper station.

Ashburn, P. M., major, granted leave of absence for one month.

Lambie, J. S., Jr., lieut., ordered from Fort Monroe, Va., to duty at Camp St. Asaph's, Va.

Frick, E. B., major, granted leave of absence for ten days.

Chamberlain, W. P., major, detailed to represent the medical department of the army at the meeting of the American Society of Tropical Medicine at Washnigton, D. C., April 10, 1909.

Webber, H. A., major, ordered to Fort Niagara, N. Y., for duty on relief from treatment at Hot Springs, Ark.

Truby, W. F., major, granted leave of absence for three months.

Adair, G. W., col., retired from active service, on account of physical disability, Feb. 25, 1909.

Hess, L. T., major, granted leave of absence for three months.

Boak, S. D., dental surg., ordered to Vancouver Barracks, Wash., for duty on return from Cuba.

Craig, E. J., dent. surg., ordered to Fort Omaha, Neb., for twenty days, and thence to Fort Crook, Nebr., for one month.

Ryan, E. P. R., dent. surg., ordered to Fort Robinson, Nebr., for one month, and thence to Fort Meade, S. D., for one month.

Wheate, J. M., M. R. C., ordered to Fort Snelling, Minn., for temporary duty.

Patterson, E. W., M. R. C., arrived at San Francisco, Cal., on the transport *Buford* and ordered to Fort Sam Houston, Texas, for duty.

Parkman, W. E., M. R. C., granted leave of absence to March 7, 1909.

Peck, L. B., M. R. C., relieved from duty at Fort Andrews, Mass., and ordered to Fort Banks, Mass.

Tyler, G. T., M. R. C., relieved from duty at Fort Porter, N. Y., and ordered to Plattsburg Barracks, N. Y., for duty.

Sabin, W. E., M. R. C., relieved from duty in the Philippines division; will proceed on first available transport to San Francisco, for orders.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ending Feb. 27, 1909:

Old, E. H. H., P. A. surgeon, detached from the navy yard, Washington, D. C., and ordered to temporary duty at the Naval Training Station, Newport, R. I.

Bachus, J. W., P. A. surgeon, ordered to duty at the Naval Hospital, Narragansett Bay, R. I.

McDonnold, P. E., P. A. surgeon, detached from the *Connecticut* and ordered to temporary duty at the Naval Training Station, Newport, R. I.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine Hospital Service for the seven days ended Feb. 24, 1909:

von Ezdorf, R. H., P. A. surgeon, granted 2 days' leave of absence from Feb. 2, 1909, under paragraph 189, Service Regulations.

Parker, Herman B., P. A. surgeon, granted 1 day's leave of absence, Feb. 20, 1909, on account of sickness.

Boggess, John S., P. A. surgeon, relieved from duty on revenue cutter *Perry* and directed to proceed to Baltimore and report to the commanding officer of the revenue cutter *Tahoma* for duty.

Smith, F. C., P. A. surgeon, relieved from temporary duty in Hygienic Laboratory and directed to rejoin station at Fort Stanton, N. M.

Smith, P. C., P. A. surgeon, granted 10 days' leave of absence en route to station at Fort Stanton, N. M.

Simonson, G. T., acting assistant surgeon, granted 5 days' leave of absence from Feb. 23, 1909.

Stearns H. H., acting assistant surgeon, granted 1 day's extension of annual leave on account of sickness, Feb. 5, 1909.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Heath and Marine-Hospital Service, during the week ended Feb. 26, 1909:

SMALLPOX—UNITED STATES

Alabama: Mobile, Jan. 30-Feb. 6, 1 case.

Arkansas: Magnolia, Jan. 5-Feb. 13, 25 cases.

California: Jan. 30-Feb. 6, 1 case; San Francisco, Feb. 7-13, 2 cases.

District of Columbia: Washington, Feb. 6-13, 3 cases.

Illinois: Cairo, Feb. 6-13, 25 cases; Danville, Feb. 7-14, 1 case; Peoria, Feb. 6-13, 1 case, imported.

Indiana: Elkhart, Feb. 6-13, 1 case; Evansville, Feb. 17, 1 case; Lafayette, Feb.1-15, 8 cases.

Kansas: Kansas City, Feb. 6-13, 3 cases; Topeka, Jan. 30-Feb. 13, 17 cases.

Kentucky: Covington, Feb. 6-13, 1 case; Lexington, 1 case.

Maine: Van Buren, Jan. 30-Feb. 6, 5 cases.

New York: Niagara, Feb. 6-13, 1 case; Schenectady, 1 case.

North Carolina: Charlotte, Jan. 1-31, 1 case.

Ohio: Cincinnati, Feb. 5-12, 9 cases; Dayton, Feb. 6-13, 1 case.

Oregon: Portland, Dec. 1-31, 21 cases.

Tennessee: Knoxville, Feb. 6-13, 3 cases; Memphis, 22 cases; Nashville, 1 case.

Texas: Cotulla, Feb. 17, present; San Antonio, Feb. 6-13, 1 case.

Utah: Salt Lake City, Jan. 1-31, 110 cases, 1 death.

Virginia: Norfolk, Feb. 4-17, 3 cases, from vessel.

Washington: Seattle, Jan. 1-31, 5 cases; Spokane, Jan. 30-Feb. 6, 1 case.

Wisconsin: La Crosse, Feb. 6-13, 2 cases; Manitowoc, 2 cases; Milwaukee, 9 cases.

SMALLPOX—FOREIGN

Arabia: Aden, Jan. 4-18, 5 *deaths*.

British Honduras: Stann Creek, Feb. 11, 1 case, imported.

Brazil: Rio de Janeiro, Dec. 27-Jan. 17, 194 cases, 83 deaths; Santos, Dec. 13-20, 2 cases, 1 death.

Canada: Halifax, Jan. 30-Feb. 6, 6 cases; Yarmouth, Feb. 13-20, 22 cases.

China: Shanghai, Dec. 26-Jan. 9, 2 cases, 1 death.

Egypt: Cairo, Jan. 7-14, 31 cases, 16 deaths.

Germany: Bremen, Jan. 16-23, 2 cases.

Guatemala: Guatemala City, Feb. 10, epidemic.

India: Bombay, Jan. 12-19, 5 deaths; Calcutta, Jan. 2-9, 31 deaths; Madras, Jan. 2-8, 1 death Rangoon, Jan. 2-9, 3 deaths.

Indo-China: Saigon, Dec. 26-Jan. 3, 1 case, 1 death.

Italy: General, Jan. 24-31, 3 cases; Naples, 29 cases, 8 deaths.

Malta: Jan. 15-23, 1 case.

Mexico: Monterey, Jan. 31-Feb. 7, 1 death.

Peru: Lima, Jan. 16, 3 cases.

Russia: Moscow, Jan. 16-23, 27 cases, 15 deaths; Riga, Jan. 23-30, 1 case; St. Petersburg, Jan. 9-16, 6 cases, 2 deaths.

Spain: Vigo, Jan. 23-30, 1 death.

Straits Settlements: Singapore, Dec. 26-Jan. 2, 1 case.

YELLOW FEVER

Barbados: Jan. 24-Feb. 9, 10 cases, 4 deaths.

Martinique: Fort de France, Jan. 16-30, 3 cases, 1 death.

Mexico: Merida, Jan. 30-Feb.6, 1 death; Ticul, 1 case, 1 death.

CHOLERA

India: Bombay, Jan. 12-19, 1 death; Calcutta, Jan. 2-9, 11 deaths.
Madras, Jan. 2-8, 1 death; Rangoon, Jan. 2-9, 1 death.
Russia: General, Jan. 9-16, 122 cases, 54 deaths; Cronstadt,
2 cases; Moscow, Jan. 16-23, 1 case, 1 death; St. Petersburg, Jan.
9 16, 178 cases, 46 deaths; Jan. 23-29, 135 cases, 49 deaths.
Straits Settlements: Singapore, Dec. 21-Jan. 2, 41 deaths.

PLAGUE

Brazil: Rio de Janeiro, Dec. 27-Jan. 17, 11 cases, 6 deaths.
Chile: Iquique, Jan. 9-23, 8 cases, 3 deaths.
Egypt: General, Jan. 22-28, 6 cases, 2 deaths.
India: General, Jan. 2-16, 5,136 cases, 4,146 deaths; Bombay,
Jan. 12-19, 17 deaths; Calcutta, Jan. 2-9, 14 cases; Rangoon, 12
deaths.
Japan: Nishinomiya, Jan. 6, 1 case.
Peru: General, Jan. 9-16, 32 cases, 18 deaths; Callao, 5 cases,
3 deaths; Lima, 5 cases, [illegible] deaths.
Turkey: Jiddah, Jan. 22-24, 3 cases, 3 deaths.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Connecticut Homeopathic: New Haven, Mar. 9. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.

Connecticut Eclectic: New Haven, Mar. 9. Sec., Dr. T. S. Hodge, Torrington.

Connecticut Regular: New Haven, Mar. 9-10. Sec., Dr. Charles A. Tuttle, 196 York St.

Maine: Portland, Mar. 9-10. Dr. W. J. Maybury, Saco.

Massachusetts: Boston, Mar. 9-11. Sec., Dr. Edwin B. Harvey, Room 159, State House.

Higher Requirements in Kansas

At a meeting held February 9, the Kansas Board of Medical Registration and Examination adopted the standard of preliminary education as outlined by the Council on Medical Education, which fixes the requirement as a four-year high school education or its equivalent and, in addition, after Jan. 1, 1910, a year of not less than nine months, devoted to the study of physics, chemistry, biology and one modern language, preferably German or French. There are now six states which have increased their requirements to one or more years of college work in addition to a four-year high school education. Minnesota and North Dakota will both require two years of college work, while Connecticut, South Dakota, Colorado and Kansas will require one year.

Iowa December Report

Dr. Louis A. Thomas, secretary of the Iowa State Board of Medical Examiners, reports the written examination held at Des Moines, Dec. 8-10, 1908. The number of subjects examined in was 8; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 16, of whom 8 passed and 8 failed. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Northwestern University Medical School	(1906)	85.7
Sioux City College of Medicine	(1907)	80.6
Drake University	(1908)	86
University of Louisville	(1908)	85.6
Johns Hopkins University Medical School	(1907)	87.3
Creighton Medical College	(1908)	81.1
University of Toronto, Canada	(1906) 75; (1907)	81.2

FAILED

College	Year Grad.	Per Cent.
College of Physicians and Surgeons, Chicago	(1905)	62.7*
University of Iowa	(1906) 71.5* (1908)	70.2*
University of Iowa, Homeopathic Department	(1908)	64.6*
Keokuk Medical College, College of Phys. and Surg.,	(1901)	68.3; (1906) 53.2*.
Drake University	(1908)	65.2*
Barnes Medical College	(1908)	70.7

* Failed also at a previous examination.

Marriages

H. H. Cheatham, M.D. Havana, Fla., to Miss Annie Eichinger of North Santa Clara, Fla., February 17.

John Randolph Garrett, M.D., Roanoke, Va., to Miss Rebecca MacDowell, at Roanoke, February 17.

William Stewart McMurray, M.D., to Miss Ora May Bankhead, both of Bullock Creek, S. C., February 24.

Charles B. Allen, M.D., Parma, Idaho, to Miss Gracia M. Tibbetts of Everett, Mass., at Boise, Idaho, February 2.

Alfred E. Spalding, M.D., Luverne, Minn., to Miss Alma Orth of Minneapolis, at Lidgerwood, N. D., February 12.

Joseph Fleetwood Haselden, M.D., Greeleyville, S. C., to Miss Mamie Virginia Boyle of Sumter, S. C., January 27.

Thomas Lawrence Disque, M.D., Pittsburg, to Miss Margaretta Watt Wilson of Germantown, Pa., February 24.

Frederick Davis Ruland, M.D., Westport, Conn., to Miss Leo Mabel Shattuck Van Dusen of Oneida, N. Y., January 27.

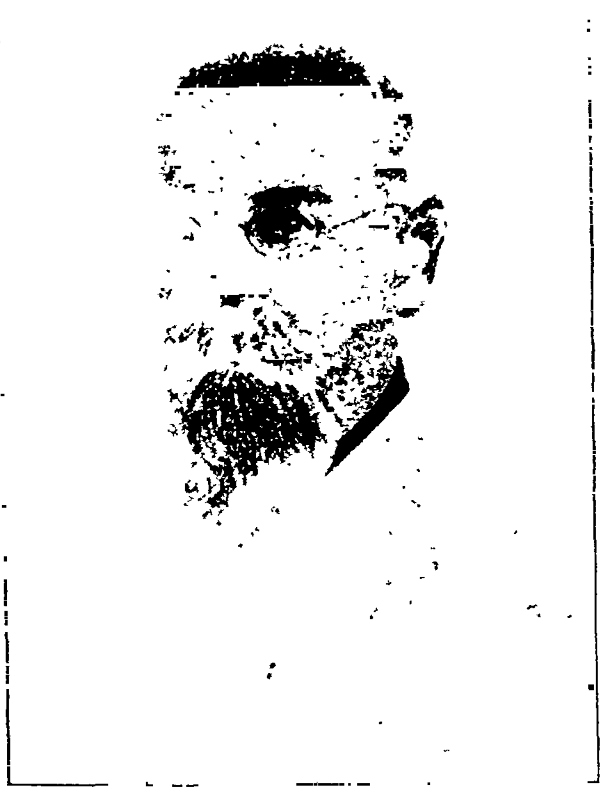
William McDonald, Jr., M.D., Providence, R. I., to Miss Elizabeth Marchon Hurkamp, at Fredericksburg, Va., February 18.

Deaths

Daniel Roberts Brower, M.D. Georgetown University, Washington, D. C., 1864; dean of the neurologists of Chicago; died at his home in that city, March 1, from cerebral hemorrhage, aged 69. He was born in Philadelphia and graduated from the Philadelphia Polytechnic College in 1860 with the degree of M.S.; he served in the Army as assistant surgeon of volunteers two years during the Civil War; and afterward as superintendent of the Freedmans Hospital, Richmond, Va., and later of the Virginia Eastern State Hospital for the Insane, Williamsburg, for nine years. He came to Illinois in 1875 and settled in Chicago, and soon became an important figure in the medical life of the city. He was for many years connected with Rush Medical College, first as professor of materia medica and therapeutics, and later as professor of nervous and mental diseases, and also held for many years the chair of diseases of the nervous system in the Northwestern University Woman's Medical School and the Chicago Post-Graduate Medical School.

He was a member of the American Medical Association; American Neurological Association; American Electro-Therapeutic Association; National Association for the Study of Epilepsy; Mississippi Valley Medical Association and Chicago Physicians' Club; the American Medico-Psychological Association: an honorary member of the Moscow Society of Neurologists and Psychiatrists and one of the founders of the Senn Club; and had been several times a delegate to international medical congresses. He was a member of the attending staff of St. Joseph's, Cook County and Presbyterian hospitals and consulting physician to the Women's and Children's Hospital and Oakwood Sanitarium. He was the author of a standard text-book on insanity, and of many monographs on nervous and mental diseases. He was given the honorary degree of A.M. by Wabash College, and that of LL.D. by Georgetown University, Kenyon College and St. Ignatius College.

He was in apparent good health until a week before his death, when he was seized with hemiplegia causing paralysis on the left side, but apparently not affecting his mentality. He gradually failed physically, but retained consciousness until a few hours before his death, which occurred at 3:30 a. m., Monday, March 1.



DANIEL R. BROWER, M.D., BORN 1839; DIED 1909

Dr. Brower was one of the most beloved medical men of Chicago. He always had kind words and help for the younger members of the profession; was an able consultant, and in spite of advancing years, kept thoroughly in touch with the latest ideas in his most complex of specialties. He was a constant worker for the public good; and to his efforts have been due many of the reforms instituted in the care of the dependent insane charges of the state. One of the last public services he performed was as a member of the non-partisan committee appointed to investigate conditions in the penal and charitable institutions of the state.

William McCollom, M. D. Castleton (Vt.) Medical College, 1853; for many years a member of the American Medical Association; and one of the oldest practitioners of Brooklyn, N. Y.; inspecting surgeon for the United States Government in 1861; and for many years chairman of the Brooklyn Board of Pension Examining Surgeons; sometime president of the Vermont State Medical Society, and of the Kings County (N. Y.) Medical Association; an incorporator, three years vice-president and one year acting president of the Medical Association of Greater New York; vice-president of the New York State Medical Association; and honorary member of the Connecticut State Medical Society; died at his home in Brooklyn, February 23, from acute bronchitis and pulmonary edema, aged 77.

William P. Illing, M.D. University of Arkansas, Little Rock, 1889; a member of the American Medical Association; and formerly president of the Little Rock Medical Society; a member of the Association of Hospital Superintendents of the United States and Canada, and of the Medical Society for the Study of Alcohol and Narcotics; physician to the Florence Chittenden Home; physician of Pulaski county; clinical lecturer on mental and nervous diseases in the University of Arkansas; one of the most prominent practitioners of Little Rock; died suddenly at his home, February 19, from heart disease, aged 41.

Philo Judson Farnsworth, M.D. University of Vermont, Burlington, 1858; College of Physicians and Surgeons, New York City, 1860; professor of materia medica and diseases of children in the University of Iowa from 1871 to 1894, and thereafter emeritus professor; for many years local surgeon at Clinton, Iowa, for the Chicago and Northwestern Railroad; a member of the local school board and for several years its president; the founder of the first public library in the city; died in Agatha Hospital, February 14, from injuries received by a fall down the stairs of his residence, three days before, aged 79.

Frederick Irving Knight, M.D. Harvard Medical School, Boston, 1866; a member of the American Medical Association and American Climatological Association; fellow of the American Academy of Arts and Sciences, and American Laryngological Association; consulting physician to the Massachusetts General Hospital and Sharon Sanatorium and Free Home for Consumptives; clinical professor of diseases of the throat and chest in Harvard Medical School for several years; died February 20, at his home in Boston, from angina pectoris, aged 67.

Thomas Lancaster, M.D. University of Pennsylvania, Philadelphia, 1866; a member of the Medical Society of the State of Pennsylvania and the Pennsylvania Pharmaceutical Association; director of schools of Philadelphia in 1880; formerly visiting physician to the Charity and Municipal hospitals; a specialist in climatology and diseases of the throat and lungs; died at the home of his son in Philadelphia, February 18, from senile debility, aged 75.

Charles Emmett Quigg, M.D. Bennett Medical College, Chicago, 1887; a member of the State Medical Society of Wisconsin; physician to the Tomah Indian Industrial School; formerly a member and for several years secretary of the State Board of Medical Examiners; health officer and three times mayor of Tomah, and a member of the state legislature; died at his home in Tomah, February 12, from pneumonia, aged 56.

John H. Tressel, M.D. Medical Reserve University, Cleveland, Ohio, 1863; a member of the American Medical Association; Union Medical Association of Northeastern Ohio; Tri-State Medical Society; International Association of Railway Surgeons; and Associations of Surgeons of the Pennsylvania Company; surgeon to the Pennsylvania System at Alliance, Ohio; died at his home, February 17, from peritonitis, aged 79.

Walter Allen Harding, M.D. Tufts College Medical School, Boston, 1899; a member of the American Medical Association and president of the Everett (Mass.) Medical Society; for two years assistant professor of anatomy in the College of Physicians and Surgeons, Boston; and twice a member of the common council of Everett; died at his home, February 16, from pneumonia, aged 34.

Frank C. Hoskins, M.D. Western Reserve University, Cleveland, 1904; a member of the American Medical Association and Cleveland Academy of Medicine; physician in charge of Fairmount Home and the Tuberculosis Dispensary, and assistant surgeon to the nose and throat dispensary of his alma mater; died in Charity Hospital, Cleveland, February 18, from peritonitis, aged 30.

Samuel Davies Price, M.D. University of Virginia, Charlottesville, 1904; of Switchback, W. Va.; a member of the West Virginia State Medical Association; died February 12, at the Bluefield Sanitarium from typhoid fever, aged 26. His death is believed to have been the result of his heroic attention to the sufferers in the recent mine explosion at Switchback.

Ernest Henry Wheeler, M.D. Dartmouth Medical School, Hanover, N. H., 1893; of Augusta, Maine; lecturer on tropical medicine in his alma mater; who served as a contract surgeon in the U. S. Army in the Philippines; died at his home in Augusta, Maine, February 15, from peritonitis, following an operation for appendicitis, aged 38.

John Warren Atwood, M.D. Jefferson Medical College, Philadelphia, 1888; a member of the American Medical Association; surgeon to Highland Hospital, Matteawan, N. Y., and attending physician to the Protestant Episcopal Orphans' Home; and a well-known practitioner of Fishkill-on-Hudson; died at his home February 21, aged 46.

John McArden Johnstone, M.D. University of Pennsylvania, Philadelphia, 1852; who rendered faithful service during the epidemics of yellow fever which devastated Savannah, Ga., before the Civil War; division surgeon and medical director in the Confederate service; died at his home in Savannah, February 14, from pneumonia, aged 79.

Nathaniel Alden Robbins, M.D. Harvard Medical School, Boston, 1864; for twenty-five years chief surgeon to the New York Fire Department; assistant surgeon in the Navy during the Civil War; for several years surgeon to the Brooklyn City Dispensary; died at his home in Brooklyn, February 16, from heart disease, aged 68.

Alexander N. Denman, M.D. Tulane University, New Orleans, 1886; of Lufkin, Texas; a member of the State Medical Association of Texas; while crossing a railway track in Lufkin in his automobile Sept. 30, 1908, was run into by a switch engine and sustained injuries from which he died ten hours later.

Nicholas Sellberg, M.D. Chicago Homeopathic Medical College, 1903; of York, Neb.; a member of the Nebraska State Medical Association; died at a hotel in Hastings, February 12, from the effects of a gunshot wound of the head, believed to have been self-inflicted with suicidal intent, aged 37.

James Allen Creason, M.D. Kentucky School of Medicine, Louisville, 1889; a member of the Kentucky State Medical Association; formerly a practitioner of Lexington; died at the home of his mother near Jacksonville, Bourbon county, Ky., February 16, from pneumonia, aged 45.

Joseph Huber, M.D. College of Physicians and Surgeons, New York City, 1888; of Manhattan; a member of the Medical Society of the State of New York and of the New York Academy of Medicine; died in the Lebanon Hospital, February 21, from edema of the glottis, aged 50.

William Appley, M.D. University of Pennsylvania, Philadelphia, 1852; a member of the Phelps County (Mo.) Medical Society and County Board of Pension Examiners for several years; died at his home near Macedonia, Mo., February 4, aged 88.

Merritt Moses Ayers, M.D. University of Michigan, Ann Arbor, 1894; of Ohio City, Ohio; a member of the Ohio State Medical Association; died at the home of his brother in Wauseon, Ohio, February 16, from perforating ulcer of the duodenum, aged 41.

George Wells Way, M.D. Medical School of Maine, Brunswick, 1882; a member of the Maine Medical Association; secretary of the Megantic Fish and Game Association; died at his home in Portland, February 12, from meningitis, aged 52.

Horace E. Merkel, M.D. University of Pennsylvania, Philadelphia, 1885; formerly of Seattle; and surgeon of the Columbia and Puget Sound Railroad; died in the General Hospital, Kansas City, Mo., February 12, from septicemia.

Julius Augustus Escobar, M.D. New York University, New York City, 1891; First Lieutenant Medical Reserve Corps, U. S. Army; fell in an open well at Imus, Cavite, Luzon, P. I., Nov. 15, 1908, and was drowned, aged 40.

William Chandler Flagg, M.D. Medical College of Virginia, Richmond, 1882; a member of the Medical Society of Virginia; died suddenly from heart disease, at his home near Ruther Glen, February 10, aged 54.

Theodore H. Kemter, M.D. University of Kiel, Germany, 1862; assistant surgeon in the Schleswig-Holstein campaign; since 1871 a practitioner of Syracuse, N. Y.; died at his home, February 12, aged 70.

Joseph John Mann (license N. C., 1886), a member of the Medical Society of the State of North Carolina; died at his home in Louisburg, May 28, 1908, it is said from the use of alcohol and morphin, aged 48.

Charles Henry Roberts, M.D. Albany (N. Y.) Medical College, 1846; for nine years president of the Carolina Central Railroad; died at his home near Highland, Ulster county, N. Y., February 11, aged 87.

George G. Tandy, M.D. Royal College of Physicians and Surgeons, Glasgow, Scotland, 1860; of San Francisco; died at the home of his daughter in that city, February 12, from cerebral hemorrhage.

Nathaniel H. Longabaugh, M.D. University of Pennsylvania, Philadelphia, 1857; formerly of Norristown, Pa.; died at the home of his daughter in Camden, N. J., February 12, from senile debility, aged 86.

Charles D. Abbey, M.D. College of Physicians and Surgeons, Chicago, 1890; a member of the Illinois State Medical Society; died at his home in Chicago, February 21, from cardiac dropsy, aged 61.

Horace M. Logee, M.D. Western Homeopathic College, Cleveland, 1863; president of the Ohio State Homeopathic Medical Society in 1881; died at his home in Linesville, Pa., February 6, aged 74.

Elmer Judson Dowell, M.D. Maryland Medical College, Baltimore, 1900; of New York City; died at the home of his brother in Raleigh, N. C., Sept. 27, 1908, from acute multiple neuritis, aged 33.

George B. Murray, M.D. Albany (N. Y.) Medical College, 1873; of Sandy Hill, N. Y.; formerly of Greenwich, died suddenly from cerebral hemorrhage in a hotel in Sandy Hill, February 10, aged 59.

Charles E. Brown, Jr., M.D. University of Tennessee, Nashville, 1901; of Springfield, Mo.; died in the Springfield Hospital, Dec. 6, 1908, from an accidental gunshot wound of the abdomen, aged 39.

Eugene Franklin Hamburg, M.D. Long Island College Hospital, Brooklyn, 1883; a member of the Medical Society of the State of New York; died at his home in Rochester, February 7, aged 55.

John W. Burns, M.D. Eclectic Medical Institute, Cincinnati, 1892; formerly superintendent of schools of Richland county, Wis.; died at his home in Marshfield, Wis., February 9, from asthma, aged 40.

Adolph von Duering, M.D. New York University, New York City, 1885; died at his home in Bronx Borough, New York City, February 10, from septicemia, due to an operation wound, aged 56.

Joseph Scinton Casto, for more than fifty years a practitioner, and for two terms lecturer of the State Grange of Oregon, died at his home in Carus, Ore., January 12, from paralysis, aged 81.

Arthur Noble (license, Ohio, 1897), a member of the Ohio State Medical Association; and one of the oldest practitioners of Adams county; died at his home in Winchester, February 11, aged 83.

George S. Lockwood, M.D. University of Michigan, Ann Arbor, 1870; a member of the State Medical Society of Wisconsin; died recently and was buried from his home in Rome, January 29.

James William Clay Hall, M.D. Bellevue Hospital Medical College, New York City, 1869; a Confederate veteran; died at his home in Keyser, W. Va., February 5, from paralysis, aged 65.

Alexander H. Smith (license, Lauderdale county, Ala., 1890); a member of the Medical Association of the State of Alabama; died at his home in Lexington, February 17, aged 65.

William Faber, M.D. Columbus (Ohio) Medical College, 1889; coroner of Wayne County, Ohio, for three terms; died at his home in Rittman February 4, from disease of the liver, aged 43.

Otto Willis Woodward, M.D. Northwestern University, Chicago. 1908; of Nashua, Iowa; died at the home of Dr. P. E. Stuart in that city. February 4. from typhoid fever, aged 25.

Smith Gordon, M.D. University of Pennsylvania, Philadelphia. 1855; a member of the Rapides Parish (La.) Medical Society; died at his home in Alexandria, January 26, aged 75.

John J. Ensor (years of practice. Tenn.. 1889). for more than half a century a practitioner of Tennessee; died at his home in Bristol, February 12, from senile debility, aged 82.

Tillman L. Loyd, M.D. Memphis (Tenn.) Hospital Medical College. 1886; of Myrtistown, La.: died at the Dale Sanatorium. Texarkana, Ark.. January 17. from nephritis, aged 47.

Edward Henry McCabe, M.D. Long Island College Hospital, Brooklyn, 1874; a member of the Delaware State Medical Society; died at his home in Dagsboro, Del., recently, aged 66.

John Foster Lightfoot, M.D. Medical College of Ohio, Cincinnati, 1884; a Federal guard during the Civil War; died at his home in Hawesville, Ky., from uremia. February 13.

Otho William Hill, M.D. University of Colorado, Boulder, 1908; house physician in St. Joseph's Hospital, Denver; died in that institution February 11, from pneumonia, aged 23.

Jacob Cathedral Arant, M.D. Medical College of the State of South Carolina, Charleston. 1859; died at his home near Elloree, S. C., Nov. 8, 1908. from senile debility, aged 77.

William Lilley (years of practice, Mass.); a veteran of the Civil War; for more than thirty years a practitioner of New Bedford, Mass.; died at his home, February 9, aged 64.

David A. Kirk, M.D. Detroit (Mich.) Medical College, 1888; of LeSueur, Minn.; formerly a member of the Minnesota State Medical Association; died in Minneapolis in January.

John Harrison Francis Irvine, M.D. Willamette University, Salem, Ore.. 1876; was accidentally shot and killed at his farm near Tallman, Ore., Sept. 22, 1908, aged 58.

William W. Payne, M.D. Medical College of Virginia, Richmond, 1860; a Confederate veteran; died at his home in Warrenton, Va.. February 3, from nephritis, aged 75.

John Joseph Garrity, M.D. University of Toronto, 1908; of Toronto; an interne at St. Mary's Hospital, Evansville, Ind.; died in that institution February 22, aged 30.

John M. Gambrell, M.D. Transylvania University, Lexington, Ky., 1842; of Huntsville. Texas; died at the home of his son in Lockhart, Texas, Dec. 9, 1908, aged 89.

Ira C. Shute, M.D. University of Louisville (Ky.). 1873; a member of the Louisiana State Medical Society; died at his home in Opelousas, Dec. 4, 1908, aged 58.

Egbert Perses Williams, M.D. University of Virginia, Charlottesville, 1881; died at his home in Stedman, N. C., January 30, from cerebral hemorrhage, aged 49.

John Gilder Lowber, M.D. Eclectic Medical Institute, Cincinnati. 1878; died at his home in South Pittsburg, Tenn., Dec. 17, 1908, from pneumonia, aged 65.

John H. Armstrong, M.D. University of Tennessee. Nashville. 1880; died at his home in Caney, Okla., February 15. from heart disease, aged 50.

John Johnston, M.D. Kentucky School of Medicine, Louisville, 1885; died at his home in Sidney, Ark., February 12, from pneumonia, aged 65.

Francis Middlemas, M.D. Harvard Medical School, Boston, 1873; died suddenly at his home in Berwick, N. S., Nov. 10, 1908, aged 62.

Joseph R. Gunston, M.D. Eclectic Medical University, Kansas City, 1904; died at his home in Lenora, Kan., February 8.

John Calendar Clark, M.D. University of Nashville (Tenn.), 1900; died at his home in Mount Calm, Texas, February 9.

Sheldon J. Bassett (years of practice, Ill., 1878), died at his home in St. Elmo, Ill., February 5, aged 71.

Alfred Day, M.D. University of Buffalo, N. Y., 1887; died at his home in Buffalo, February 12, aged 75.

Miscellany

Clippings from Lay Exchanges

GAS GASTRITIS

"Mrs. ——— died . . . from gastric poisoning resulting from eating canned salmon. . . . For two years past the deceased had been suffering from weak heart action, and the weakened condition of that organ made it more easily affected by the poisonous gas."—*Platte* (Neb.) *Semi-Weekly Tribune.*

THANKS TO THE DOCTOR—NO MENTION OF STORK

"Mr. and Mrs. X———, September 13, a girl. Thanks to Dr. K——— H———."—*New York Herald.*

VERY MUCH ELONGATED APPENDIX ON SATURDAYS

"Will M——— is driving H——— F———'s meat around while H——— is confined in the hospital in town getting his appendix cut out which takes two days per week and extends up in Bucks county on Saturdays not saying anything about customers in Fox Chase and Torresdale."—*Rustleton* (Pa.) *News* quoted in *Outdoor Life.*

A MUSICAL TREAT

"What is described . . . as a remarkable surgical operation has been performed at the H——— hospital with apparent success. . . . The patient, Mrs. D———, was suffering from a cancerous growth of the abdominal organ. . . . The operation lasted for nearly three hours. Six organs were removed including the upper portion of the bladder, the vermiform appendix, ten inches of the ilium and the ascending colon. According to the physicians operations on these individual organs have been performed, but never in a combination of six. . . Dr. E——— said it appeared the time was not far distant when almost any excepting the vital organs can be removed without danger of death."—Associated Press Telegram to Chicago *Journal.*

Rules Governing Mailing of Pathologic Specimens.—Few physicians are conversant with the stringent regulations of the Postoffice Department governing the admission to the mails of cultures and specimens of diseased tissues. Inasmuch as it is frequently necessary to transmit pathologic specimens to laboratories for test, and especially because speedy transmission is essential, the text of the postal rules on this subject is printed in full below. Special attention is directed to the exactitude of the requirements for packing. It should be noted that the postal service will handle cultures or specimens only when destined to United States, state or municipal laboratories. Specimens intended for medical laboratories other than public institutions must be transmitted by messenger or express.

SECTION 495, POSTAL LAWS AND REGULATIONS

DISEASED TISSUES—WHEN MAILABLE

1. Specimens of diseased tissues may be admitted to the mail for transmission to United States, state or municipal laboratories, only when inclosed in mailing packages constructed in accordance with this

2 [illegible] ires of micro-organisms in media that are fl [illegible] erature (below 45° C. or 113° F.) are unma [illegible] may be sent in media that remain solid at ordinary temperatures.

INDORSEMENT ON PACKAGES

3. On the outside of every package of diseased tissues admitted to the mails shall be written or printed the words "Specimen for Bacteriologic Examination. This package to be treated as letter mail." No package containing diseased tissues shall be delivered to any representative of any of said laboratories until a permit shall have first been issued by the postmaster general certifying that said institution has been found to be entitled, in accordance with the requirements of this regulation, to receive such specimens.

MANNER OF PREPARATION FOR MAILING

4. Packages used for conveying through the mails pathologic specimens for bacteriologic examination for diagnosis in cases of suspected diphtheria, tuberculosis, and other communicable diseases, shall be constructed and prepared as follows:

MOIST SPECIMENS. VIAL OR TUBE

a. The receptacle for moist specimens of diseased tissues shall be a strong glass vial or test tube having a capacity not greater than two drams. The vial shall be covered and made water-tight by the use of a metal screw cap and a rubber or felt washer which has been immersed in melted paraffin, or, if a test tube be used, it shall be covered with a tightly fitting rubber cap.

INNER BOX

b. The vial or test tube shall be placed inverted in a circular tin box, which shall be made of I. C. bright tin plate, and have flush or countersunk bottom and soldered joints and not be smaller than one and one-eighth inches in diameter and three inches long, nor larger than two and one-quarter inches in diameter and five and one-half inches long. This box shall be closed by a metal screw cover and a rubber or felt washer, or tightly fitting metal-sliding cover, and shall be so packed with absorbent cotton, closely laid, that the glass or test tube contained therein shall be evenly surrounded on all sides by cotton.

OUTER TIN OR WOODEN BOX

c. The tin box shall be placed inverted inside of a larger tin box similar to the one already described, which should snugly receive the specimen box. On the inside of the sides and bottom of this outer box there shall be a lining of compressed paper not less than three sixteenths of an inch in thickness. This outer tin box shall be closed by a metal screw cap and a rubber or felt washer. This outside box may also consist of hard wood, in the form of a block with a cylindrical hole bored in one end and extending to within not less than one inch of the opposite end; the open end to be closed with a wooden or metal screw cap with a rubber or felt washer. Or the outside box may be a cylindrical wooden box having a screw cap and washer. The thickness of the sustaining part of the wooden tube must be not less than one-quarter of an inch and be lined same as the tin box.

DRY SPECIMENS. TEST TUBE

d. The receptacle for dry specimens of diseased tissues shall be a glass test tube, three inches in length and one-half inch in diameter. This test tube shall be enclosed in a circular tin box similar to those already described but measuring two and one-quarter inches in diameter, and five and one-half inches in length, and be lined on its sides and bottom with compressed paper not less than one-quarter of an inch in thickness. The test tube shall be closely packed in cotton, and the box shall be closed by a metal screw cap and a rubber or felt washer.

The Campaign in Italy Against Uterine Cancer.—This was the leading theme discussed at the recent Italian Congress for Obstetrics and Gynecology. Pestalozza delivering an address on the present status of the question, which he summarized as: (1) increased faith in the efficacy of surgical treatment; (2) necessity for a campaign in favor of early diagnosis; (3) new horizons opened for further research, and (4) new hopes for treatment, especially in serotherapy. Sanfelice's efforts in the line of serotherapy have been crowned with success in experiments on animals with spontaneous tumors. Several speakers emphasized the necessity for ablation of the vagina as more important than of the glands in removing uterine cancer, whether the operation was abdominal or vaginal. A number also dwelt on the necessity for prompt and thorough treatment of all benign affections of the cervix which otherwise might degenerate into cancer. The congress sent a telegram of congratulation to Professor Sanfelice. It seemed to be the general opinion that uterine cancer is decidedly on the increase in Italy, the mortality from malignant disease having increased of late years out of proportion to the increase in the population. In the discussion of puerperal fever, Truzzi stated that he had obtained good results from calcium chlorid in the pyemic form; he ascribed it to the increased density of the blood clots, thus imprisoning the pathogenic germs, besides a stimulating action on the nervous system and heart. Serotherapy has proved useful in the experience of several, as also intravenous injection of mercuric chlorid. Two new cases of osteomalacia cured with suprarenal preparations were reported. The congress next year is to be held at Rome, and the themes appointed for discussion are "Measurement of the Pelvis" and "Diagnosis and Treatment of Tubal Pregnancy." The details of the congress are published in *Ginecologia*, Nov. 30, 1908. It will be remembered that the Fifth International Congress for Gynecology and Obstetrics is also to meet at Rome during 1911.

Percussion in Treatment of Retention of Urine in Young *Children.*—Bosselut describes a simple measure with which he has been successful in curing retention of urine in little children. In a communication cited in the *Gazette Méd. Belge*, Jan. 7, 1909, page 149, he reports the fifth case in which he has found it successful. The little patient was a boy of 2 who had not urinated for nearly twenty-four hours. There was considerable elevation of temperature, with rapid pulse, the abdomen much distended, the bladder full of urine, and the child pale and moaning. With the fingers placed in turn on each side and in the middle of the abdomen he percussed with the other hand very lightly and repeatedly. In a few seconds the child voided his urine and the symptoms gradually subsided. The retention recurred again the next day, but yielded again to the same measure; since then the child has been in perfect health.

Thyroid Origin of Rheumatism.—Diamantberger has been affirming for eighteen years that there is a close connection between acute and chronic rheumatism and functional and organic disturbances in the thyroid. Other writers of late years have noted the coincidence of exophthalmic goiter with acute or chronic rheumatism and have called attention to the hypertrophy and tenderness of the thyroid in various nervous diseases. The therapeutic test of this connection between the thyroid and rheumatism is the efficacy of thyroid treatment in certain cases of rheumatism. In his latest communication on the subject, published in the *Bulletin de la Soc. Méd. des Hop.*, Oct. 22, 1909, page 335, he states that the thyroid treatment must be long continued—given for eight or ten days at a time, with longer or shorter intervals of suspension, or alternating with tonics, arsenic, iron, etc. These measures should be supplemented with the usual soothing symptomatic medication with sodium salicylate, etc. These drugs are more effectual in smaller dosage when supplemented by thyroid treatment. This latter cures, he adds; the others merely relieve.

Power of Attention in Idiocy.—Herman B. Sheffield, New York, in the *Post-Graduate*, February, states that in idiots or mentally backward children the power of attention is always either very poorly developed or entirely absent. They fail to take notice of their surroundings, stare vaguely into empty space, or move the eyes irregularly in all directions, apparently seeing nothing. This want of attention may be due to partial or total blindness, as is frequently the case in amaurotic family idiocy of central origin, without involvement of the eyeball. Occasionally the patient may be subject to congenital cataract, microphthalmos, coloboma iridis, iridemia, lesions of the vitreous, strabismus, and similar defects which, in conjunction with other stigmata, facilitate diagnosis.

The Blood in Plague.—G. Moniz has been making a systematic study of the blood in a number of cases of plague and publishes the findings in the *Gazeta Medica da Bahia*, xxxix, No. 11, page 482. During the acute phase the neutrophile polynuclears increase very much, as also the mononuclears, while the lymphocytes are reduced. As convalescence comes on, the eosinophiles, absent before, begin to reappear.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

The Coming Change in the Medical Profession

A significant and noteworthy address, under the above title, delivered by President Charles W. Eliot, of Harvard University, before the Aesculapian Club of Boston, on January 28, appears in the *Boston Medical and Surgical Journal*, February 11. Prefacing his discussion of the subject by a consideration of the changes which have taken place in the last generation in the teaching and practice of medicine, President Eliot says: "Many gentlemen in this room have lived through a prodigious change not only in medical teaching, but in all teaching, and they have witnessed also a prodigious addition to the natural forces which may be controlled by man for the development of medical science. It is almost comical to look back to the means of teaching which existed in the medical school when I first gave there a course of chemical lectures in 1855."

After some interesting reminiscences regarding the methods of instruction used at Harvard in the middle of the last century as contrasted with our present-day methods and possibilities, President Eliot asks: "Can we doubt whether the medical profession as a means of livelihood and of public service is going to be greatly changed in the near future?

Evidently it is not only liable to change, but sure to change. . . . Is it possible to foresee in any measure the coming change in the practice of medicine as a money earning and livelihood yielding profession?"

After discussing the effect of latter day cults and fads on medical practice, the reduction of fees in surgical work due to the widespread mastery of surgical technic and the effect of preventive medicine on medicine as a profession, President Eliot concludes that we must "give a new attention to preventive medicine as the stronghold of the medical profession hereafter." He suggests the increase in salaries and positions in preventive work as an indication of its growing importance, and then, discussing the effect of this development on private practice, he says: "We must see at once that the practice of the profession will be seriously affected if preventive medicine becomes successful on a broad scale. The very source of the livelihood will be dried up if preventive medicine succeeds. We might, perhaps, imagine that surgery would escape from this result of the well-directed expenditures of society for protection against disease and would remain a better field for the acquisition of a livelihood than medicine" Even this he is inclined to doubt, since all the discoveries in bacteriology and pathology tend to prevent the conditions for which surgery supplies a remedy. The results of the discovery of a cure for cancer is given as an illustration. He then asks whether the coming change will not be welcome. "Is not the function of the medical profession regarded as preventive, higher, better, happier than the function of the medical profession regarded as curative? . . . Medical education should take this direction strongly and decidedly"

President Eliot's remarks and predictions are worthy of the most careful consideration. That the ultimate work of the medical profession will be prevention and that its membership will be limited to those holding state positions as 'sanitary policemen" is doubtful, but that the value of preventive medicine will greatly increase in the next generation as it has in the past and that it will have a decided effect on the practice of medicine from an economic standpoint there is no question.

Medical Legislation

WYOMING

Dr. S. B. Miller, secretary of the State Board of Medical Examiners, writes: "The Wyoming legislature has adjourned without any changes being made in our medical-practice law Several attempts at amendment were made, but they were not successful"

NEW MEXICO

H. B 37 amends the osteopathic law of New Mexico by providing that osteopaths licensed in other states and territories having the same standard can be licensed in New Mexico without examination H. B. 84 amends a number of sections of the medical practice act, and Council Bill 63 amends the pharmacy law.

NORTH DAKOTA

S. B 131, establishing an examining board for osteopaths, has passed the senate and is now in the house.

VERMONT

Vermont has passed an act amending a number of sections of the medical practice act; an act defining optometry and authorizing the establishment of a state board of examiners in optometry of three persons, who must have been engaged exclusively in the practice of optometry for at least five years previous to appointment; an act amending the law governing the construction of school houses, churches, etc; an act appropriating $15,000 annually for the expenses of the state board of health laboratory; an act regulating the sanitation of slaughter houses; an act providing for the purchase and free distribution of antitoxin; an act amending the pure food and drug law, and an act prohibiting the discharge of sewage or other polluted matter into ponds and lakes in the state.

Physicians to Agree on Study Hours

The Lawrence Medical Club of Lawrence, Mass, appointed a committee to consult with all of the physicians of Lawrence, Methuen, Andover and North Andover and to ascertain if one afternoon and evening of each week can be set aside for study and recreation on the part of practicing physicians, the intention being to agree on a certain afternoon and evening and to ask all practicing physicians to have no office hours after 1 p. m. on that day. A similar plan has been put in practice in Lowell, Mass, Manchester, N. H, and elsewhere. Each physician in the towns named has received a circular letter asking his preference as to the day.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR JOHN H BLACKBURN, DIRECTOR
Bowling Green, Kentucky

Eighth Month

General Subject for the Month: Diseases of Spinal Cord and Nerves

First Weekly Meeting

ANATOMY

(Demonstrate Gross and Microscopic Sections)

Spinal Canal—Boundaries, extent, dimensions, contents. Epidural space

Membranes of the Cord—Dura mater: Structure, attachments, prolongations, ligamenta denticulata. Differs from dura of brain

Arachnoid Structure, attachments subarachnoid space, communication with brain, cerebrospinal fluid.

Pia mater: Structure, attachments, prolongations, filum terminale.

Structure of the Cord—Shape, length, boundaries, diameters, enlargements, carda equina Tissues anterior, posterior. Grooves, antero- and posterolateral. Gray nerve substances: Shape, commissure, horns, roots of nerves White nerve substance: directions of fibers. Posterior column postero median and posterolateral tracts Dorsal root fibers, tract of Lissauer. Lateral column; crossed pyramidal, direct cerebellar, Gowers', lateral ground bundle Anterior column; pyramidal tract, anterior ground bundle.

Blood Vessels of Cord—Anterior and two posterior arteries, radicular branches, blood supply of gray matter, of white matter. Veins of cord and membranes.

PHYSIOLOGY OF THE CORD

Reflex Actions—Definition, reflex arc Spinal reflexes: (1) simple, (2) coordinate, (3) incoordinate. Produced (1) by sensory stimuli, (2) by heightening reflex irritability. Time of reflex impulses Inhibition of reflexes (1) voluntary, (2) Setschenow's centers, (3) strong stimulation of sensory nerve, (4) poisons, chloroform, etc Reflexes: (a) plantar, (b) patellar, (c) cremasteric, (d) abdominal, (e) epigastric, (f) scapular, (g) cilio spinal. Spinal reflex centers: (a) ano spinal, (b) vesico spinal, (c) genitospinal, (d) ejaculation, (e) vasomotor, (f) sweat, (g) parturition

Conduction Paths.—White matter: Methods for determining tracts, direction of fibers, long and short tracts. Long spinal tracts (1) in posterior column, (a) tract of Goll, (b) of Burdach; (2) lateral column, (a) crossed pyramidal, (b) direct cerebellar, (c) Gowers', (d) antero lateral ground bundle; (3) anterior column, (a) direct pyramidal, (b) anterior ground bundle; direction, character of impulse of each. Tracts for pain, touch and temperature.

Gray matter 1. Anterior root cells. 2 Tract cells, (a) tautomeric, (b) heteromeric, (c) hecatomeric. 3. Golgi cells (second type) 4 Posterior root cells Relations of white and gray matter in the cord.

Reference books for eighth month: Text books on nervous and mental diseases by Church and Peterson, Dana, Pearce, Starr, and Strumpell On practice by Osler, Tyson, Anders and Hare

Society Proceedings

COMING MEETINGS

American Medical Association, Atlantic City, June 8-11.
Medical Society of the Missouri Valley, St. Joseph, Mar. 18-19.

AMERICAN PHARMACEUTICAL ASSOCIATION, CITY OF WASHINGTON BRANCH

Regular Meeting, held at George Washington University, Washington, D. C., Feb. 9, 1909

The Vice-President, **Samuel L. Hilton**, in the Chair

Physiologic Standardizing of Serums

Dr. M. J. Rosenau, Director of the Hygienic Laboratory, said that it was impossible to recognize the presence of toxins by any chemical or physical tests; it could be done only by animal experimentation. Of even greater importance than the toxins were the antitoxins. Rosenau referred to the work of Behring and Roux, and of Theobald Smith, who first demonstrated the existence of toxins which have been likened successively to ferments and to alkaloids, and Rosenau showed wherein they differed from these bodies. He briefly outlined the nature and production of antitoxins and the production of immunity in the horse, using diphtheria antitoxin as an illustration. He referred to the work of Ehrlich in connection with the determination of the strength of the material thus produced and the preparation, preservation and maintenance of a standard unit. The introduction of antidiphtheritic and antitetanic serums was to be ranked with vaccination, anesthesia and antisepsis as among the greatest benefits conferred by medical science on humanity. The need for the prompt administration of these serums was shown by the statement that a single unit, administered within twenty-four hours, would save a guinea-pig, whereas, after forty-eight hours, four thousand units would scarcely suffice. The administration of antidiphtheritic serum in the very earliest stages of the disease reduced the mortality practically to *nil*. The unfavorable statistics, on analysis, were shown to be made up from hospital cases in which the administration of the remedy has been too long delayed. It is not fair to base deductions on such cases.

Physiologic Testing as a Necessary Step in the Control of Active Drugs

Dr. Worth Hale, Hygienic Laboratory, Division of Pharmacology, remarked that progress in medicine was indicated in greater accuracy in prescribing and this was a result of the development of experimental pharmacology. With the exception of pilocarpin all the really valuable drugs introduced within the past forty years had come by this route. Digitalis was known and misused for many years, but true knowledge of its action, and consequently of its possibilities, had come only through animal experimentation. The chemistry of digitalis was still uncertain, but the biologic method afforded valuable means of standardizing its preparations. A series of samples of tincture of digitalis examined at the University of Michigan varied between 8 and 29, another series examined at the Hygienic Laboratory varied between 21 and 85, while one specimen actually caused a fall in blood pressure and cardiac depression. The method of standardization should take into consideration the therapeutic use to which the particular drug was to be applied. With digitalis, for instance, the heart method would seem to be the most logical. There was great need of uniformity in methods and it was suggested that this subject might well claim the attention of the revisers of the pharmacopeia at their next meeting.

The Need for the Study of the Action of Drugs in Pathologic Conditions

Dr. W. Salant, Department of Agriculture, said that factors modifying the action of drugs were those of absorption, oxidation and elimination; as these factors, singly or collectively, were varied, material differences in the action of drugs were to be noted. In illustration of these points the varying action of a number of different drugs, in health and in disease, was cited, and the paper closed with the suggestion that new drugs should be tested on animals in which the conditions for which the drugs were to be used in human therapy had been produced artificially.

Little Understood Phases of Biologic Testing

Dr. Albert C. Crawford, Department of Agriculture, said that the subject interested him from three different standpoints: (1) The isolation of active principles; (2) the standardization of medicinal preparations; (3) the toxicity of stock-feed materials. The chemist and the pharmacologist were mutually interdependent. Perhaps as we learned more of the chemistry of these substances we might be able to do away with the biologic test. Starling's work on the hormones was of great significance and promise. There was need not only of standardization of preparations but of uniformity in methods of standardization. With ergot, for instance, since its therapeutic use was in connection with uterine activity, this was the organ which should be selected as the basis of all biologic tests for the determination of a uniform and adequate standard preparation. The form in which the active principle existed and the ingredients with which it was associated were of the utmost importance. No avenue of attack should be left untried. With reference to feeding experiments on animals, and in the study of loco, lupine, corn stalk and millet diseases, the chemists had offered but little help. In the study of bothriocephalus anemia by the combined biologic and chemic methods the influence of oleic acid might throw some light on the explanation of immunity.

Discussion on Standardizing of Drugs

Dr. Reid Hunt, Hygienic Laboratory, spoke of the variations in strength of such products as the preparations of the suprarenal glands, of the difficulty and cost of purifying such active principles, the relative value of physiologic and chemic methods and the necessity for the establishment of reasonable standards. The relative value of natural and synthetic products could be determined only by physiologic methods. Because of their greater facility of application, and by a larger class of workers, it was desirable that chemical should replace biologic tests. This might soon be possible in the case of thyroids, through their iodin content, and yet thyroid could be tested physiologically in amounts so small as would not give an iodin test by any known chemical method. Notwithstanding the action of the Pharmacopeial Convention of 1900, physiologic tests were of necessity introduced into the pharmacopeia.

A legal test for antitetanic serum had now been promulgated and this product would no doubt receive pharmacopeial recognition. Tuberculin could be tested only by physiologic methods. Referring to the methods of making such tests, he called attention to the fact that in a large proportion of the experiments, all blood pressure observations, for instance, it was absolutely essential that the animal be fully anesthetized to eliminate any possible disturbance due to pain. Thus in suprarenal experiments the animal was deeply anesthetized. In digitalis experiments the frog's heart was studied after the frog had been killed. In experiments with cannabis indica, dogs manifested as much hilarity as do men under similar conditions. With reference to antitoxin, if the serum were good, there was no pain; if bad, it was *simply* a question of the relative importance of the guinea-pig or the child. Experiments on animals were already thoroughly regulated and were conducted only in schools or scientific laboratories under competent supervision. In spite of all the agitation and investigation in Washington no cruelty was found.

Dr. John F. Anderson, Hygienic Laboratory, spoke of federal control of therapeutic serums and the mechanism of regulation. One of the benefits to be recognized from this control was to be seen in the progressive increase in potency of these products. As yet there was no control over veterinary serums.

CHICAGO GYNECOLOGICAL AND CHICAGO SURGICAL SOCIETIES

Joint Meeting, held Jan 22 1909

Dr Henry F Lewis, President Chicago Gynecological Society, in the Chair

Nephrectomy for Persistent Hematuria

Dr **Samuel L Weber** showed a kidney which had been removed from a woman of 41 on account of persistent hematuria which could not be controlled in any other way. The extreme upper pole of the kidney disclosed an anemic infarct, and he thought that hemorrhage came from one of the papillæ of the kidney.

Arteriosclerosis of the Uterus

Dr **S L Weber** showed a uterus removed from a woman of 40. She had had 6 or 7 children, several abortions and a year ago had a miscarriage at four months, and since then has had menorrhagia. He removed the uterus by the vaginal route applying two clamps to each broad ligament. A diagnosis of arteriosclerosis was made before operation.

Long and Large Appendix

Dr **Carl Wagner** showed an appendix nine inches long which he had removed from a woman of 55 who had been ill only three days before the operation. The appendix was about the size of the index finger and contained four stones.

Dr **Wagner** also exhibited a specimen of carcinoma of the clitoris, removed from a woman of 52. The disease involved the left side of the vulva, as well as the glands. The glands were removed with the clitoris.

Multilocular Cyst of the Ovary

Dr **Henry F Lewis** showed a ligament as the result of a ventrosuspension of the uterus. The patient, aged 26, married four years, had never borne any children. Three years ago she was operated on, the operation consisting in sewing the uterus to the abdominal wall. At that time the appendages were said to be normal. She had very few symptoms of any trouble until three or four months before she consulted Dr Lewis. She had had three menstrual periods the amount of discharge being greatly diminished in each. She had nausea and increased micturition, with other symptoms indicative of pregnancy. Examination disclosed a soft tumor as large as an orange on the right side. The left side was apparently negative. The uterus was retroverted and bound down to the posterior part of the pelvis by tight adhesions which could not be absolutely freed. There was no motion of the uterus by bimanual manipulation. Operation did not disclose ectopic pregnancy, but an ordinary multilocular cyst of the ovary, which was removed with the tube, which was closely connected with it. The interesting point was the elongated artificial ligament running from the abdominal wall in the median line a few inches above the pubes to the fundus of the uterus, and which was found far back in the depths of the pelvis. The ligament measured five inches and a half.

Aneurism of the Aorta

Dr **A D Bevan** presented a patient, a fireman, aged 28, who gave a history of a specific lesion dating back ten or twelve years. Within the last year and a half he had developed a large aneurism at the junction of the ascending with the transverse part of the aorta. The patient consulted Dr Bevan about the beginning of December, when he was suffering much pain. He was unable to move his right arm, could not lie down to sleep, and there was an absence of radial pulse in the left arm. A good *x* ray picture was taken to show the exact location of the aneurism. With the assistance of Dr Dean Lewis, Dr Bevan wired it on December 10. A gold trocar was inserted on the outside to the right of the median line, to a distance of an inch and a half, but he did not get it into the aneurismal sac. Then he withdrew it and introduced it a little to the left of the median line, about two inches, when blood began to trickle drop by drop slowly from the trocar. He then introduced fifteen feet of gold wire through the trocar and applied gradually about 50 milliamperes of electricity, the positive pole being applied to the wire and the negative to a large lead plate on which the patient rested. The current was passed through the wire for about three quarters of an hour. The process was not very painful. When the current was first turned on the patient could only stand about thirty milliamperes, this was gradually increased to forty, and finally to fifty milliamperes. There has been marked improvement. Pulsation is no longer noticeable in the sac and pain has disappeared entirely. The patient can now move the right arm and can lie down and sleep with comfort. In addition to this treatment for a short time after the wiring of the aneurism the patient was placed on small doses of potassium iodid.

Gunshot Wound of Liver, Kidney, Lung and Hip, Causing Aneurism. Operation and Recovery

Dr **A E Halstead**. An Italian, aged about 40, was admitted to St Luke's Hospital Nov. 2, 1908, after being shot from behind a short time previously. Five shots were fired at him, four of which took effect. The first entered the tenth interspace on the right side, three inches from the median line behind, and passed completely through the body penetrating the chest wall, pleura, lung and liver, breaking its exit in front through the sixth costal cartilage about three inches from the median line. The second entered just below the twelfth rib, two inches from the median line on the right side, and penetrated the right kidney, passed in front of the ascending colon, and lodged in the muscles of the abdominal wall. The third entered the right hip on a level with the upper margin of the great trochanter and passed downward and out three inches above the knee, on the internal aspect of the thigh. The fourth passed through the upper part of the left scapula, upward and through the scapula, apex of left lung, and out in front. The wound of exit made by this bullet was just below the clavicle at a point corresponding to the junction of its outer and middle thirds. The wound of entrance was about two inches from the median line and just below the spine of the scapula. On admission, about thirty minutes after the shots were fired, the man was suffering from the effect of the loss of a large quantity of blood. There was no radial pulse. The abdomen was opened through a right rectus incision. The bladder and abdominal cavity were full of blood. The wound in the liver could not be reached until the lower costal cartilages were cut and retracted upward. The wound of exit of the bullet in the liver was large enough to admit the tips of three fingers. From this the blood spurted in large jets. By passing the fingers underneath the liver the wound of entrance was located. To control the hemorrhage an attempt was made to utilize the greater omentum to plug the opening. This was found inadequate, and a yard of iodoform gauze was drawn through the liver, from before backward. This, with the omentum, which was plugged into the large, flaring wound of exit, controlled the hemorrhage completely. The abdominal cavity was partially cleared of blood, when the wound leading from the kidney was seen. From this blood flowed freely into the peritoneal cavity. The wound in the anterior abdominal wall was closed, the patient turned on his left side, and the kidney exposed by a lumbar incision. A large tear was found in the kidney, extending from the convex surface through just below the hilus, and opening the pelvis. The condition of the patient did not justify a nephrectomy. The hemorrhage was therefore controlled by packing with iodoform gauze. During the operation the patient was given a quart and a half of salt solution, containing a dram of 1 to 1,000 solution of adrenalin. A hurried examination of the patient before taking him from the operating room revealed the presence of fluid in both pleural cavities and a hematoma of small size beneath the skin around the wound of exit of the bullet that penetrated the left side of the chest. The bladder was irrigated and a large quantity of fluid and clotted blood removed. The patient returned to the ward with a fairly good pulse of 160.

The progress of the case was extremely satisfactory for ten days. A small quantity of bloody urine escaped from the kidney wound during the first three days. The gauze packing in the liver was removed on the third day and a small tubular drain substituted for it. Except at the point of drainage, the abdominal wound healed by primary union. The tubular drain was removed from the liver on the eighth day. On the tenth day the patient complained of a feeling of numbness in the left hand. The night preceding he had coughed violently and had expectorated a good-sized clot of blood. Examination revealed a swelling, pulsating and expansile, just below the left clavicle, and extending in the axilla. At this time the swelling was about the size of a small orange. The left radial pulse was absent. The tumor increased rapidly in size. The left hand was distinctly cooler than the right and the feeling of numbness was increasing. At the end of forty-eight hours, in spite of compression, the tumor had nearly doubled in size, and a distinct bruit could be heard over the swelling, which still retained its expansile characteristic. The diagnosis of aneurism of the left subclavian, probably beginning at its outer third, was made and ligation decided upon. On the twelfth day after the injury the operation was performed. The usual incision for ligation of the three portions of the subclavian was made. Difficulty was encountered in finding the artery. To facilitate this three inches of the clavicle was resected. In making an attempt to ligate the vessel the aneurismal sac was ruptured. This was followed by a profuse hemorrhage, which was controlled by plugging the proximal portion of the artery with the left index finger of the operator. It seemed inadvisable, owing to the condition of the patient, to attempt to ligate the vessel proximal to the aneurism, so an eight-inch forceps was passed along the index finger in control of the hemorrhage and clamped in the proximal portion of the vessel. The distal portion was ligated and the aneurismal sac opened freely, the clots turned out and the cavities packed with gauze. The forceps were removed from the artery on the third day following. Gangrene of the hand and forearm followed, necessitating amputation at the elbow.

After this the patient rapidly recovered and is now out of the hospital.

Gunshot Wound of Chest and Spleen; Splenectomy and Recovery

Dr. A. E. Halstead: A man, aged 34, was admitted to St. Luke's Hospital Oct. 5, 1908, *in extremis*, suffering from a self-inflicted gunshot wound of the left chest. The weapon used was a cheap 38 caliber revolver. The bullet wound was just below the lower margin of the third costal cartilage and half-way between the mammary and midsternal lines. On examination the patient appeared to be *in articulo mortis*. No radial pulse could be felt. On auscultation over the precordia only the faintest heart tones could be heard. The thorax was rapidly opened through a curved incision below the fifth costal cartilage. A flap of soft tissue with fifth and fourth costal cartilages was turned up after the cartilage had been divided at both ends of the incision with a bone forceps. The pericardium was exposed. A wound of the pericardium, an inch in length, extending down and back through its lower part, was found. Below a wound that would admit four fingers was found in the diaphragm; through this the greater omentum had become dislocated and had entered the pericardium. After removing the omentum and a few clots of blood the pericardium was sutured with fine catgut. Through the lid in the diaphragm blood flowed freely from the abdominal cavity, the thorax was cleaned of blood, and the diaphragm sutured from its convex side, with a running suture of Pagenstecker linen. The abdominal cavity was then opened through a left rectus incision and the spleen explored. This was found broken into several fragments. The lower costal cartilages (6 to 7 inches) were cut in line with the abdominal incision and reflected outward, giving ready access to the spleen, which was removed after ligation of the vessels at its hilus. The fundus of the stomach had been deeply grooved by the bullet cutting through the peritoneal and muscular coats, but apparently not opening this viscus. This wound was closed by a running suture of linen, and the blood in the abdominal cavity was removed and the wound closed by interrupted through and through sutures of silkworm gut. No drainage was used. The patient made a rapid recovery without any untoward symptoms which could be attributed to the removal of the spleen. The leucocyte count during the first six days ranged from 14,000 to 18,000 and then dropped to normal. No change was noted in the lymph glands.

DISCUSSION

Dr. L. L. McArthur: I have had four or five cases of simple hemorrhage of the kidneys to deal with, and in each case it was quite feasible to check the hemorrhage by opening the kidney and packing it.

Dr. A. E. Halstead: I had a case several years ago in which a diagnosis of stone in the kidney was made. The patient, a woman, had had profuse hemorrhages at intervals of two or three months. I opened the kidney, expecting to find a stone, but found a cavernous angioma projecting into the pelvis of the kidney, which was removed. I excised a portion of the kidney with the tumor and sutured the kidney. The patient made an uneventful recovery. Cavernous angioma of the kidney may be a possible source of hemorrhage.

Dr. E. Wyllys Andrews: Wounds of the diaphragm nearly always cause traumatic hernia, and I, as well as other surgeons, have made the mistake of dealing with a number of them from the peritoneal side. Nearly every wound of the diaphragm ought to be repaired by opening the pleural cavity.

Dr. Daniel N. Eisendrath: I wish to endorse the great advantage of tamponnade for gunshot wounds of the liver. In one case it took twenty-five yards of gauze to control the hemorrhage. The patient recovered, barring the complication of empyema, which required opening later on.

Dr. A. E. Halstead: In wounds of the liver, particularly of the left lobe, I have used the great omentum in gunshot wounds, plugging the opening with it. I tried this in the first case reported, but the wound was too large and the omentum was not large enough to control the hemorrhage. It could only be controlled by gauze packing.

Dr. Emil Ries narrated the case of a man who came to him with hematuria:

Cystoscopic examination showed that blood came from the left ureter, not from the right. In this case I split the kidney, but found nothing—no tumor, no stone. I decapsulated the kidney, and in three days the hematuria ceased. If I had lost track of this man I might have thought him cured, but he returned a year later with hematuria again. Cystoscopic examination again showed that blood came from the left kidney. I extirpated this kidney and found no trace of a pathologic process except a hemorrhagic nephritis. The man has been well since.

Dr. William E. Schroeder: Removal of the kidney for simple hemorrhage is a procedure quite out of proportion to the condition, and the only excuse for removing it would be uncontrollable hemorrhage after opening it and packing it.

Dr. E. W. Andrews: Can any of the members of the society report a case of hematuria following the use of urotropin?

Dr. A. H. Ferguson: To one patient I gave fifteen grains of urotropin, three or four times a day, after a nephrotomy for hemorrhage, because there was suppuration in the wound, and I thought it would aid materially in getting rid of the pus. Instead, however, it caused hematuria from both kidneys.

Tuberculosis of the Kidney in the Male and the Female

Dr. A. D. Bevan: In a series of more than 5,000 postmortems 3 per cent. of the patients were found to have tuberculous lesions of the kidney, and of a large series of postmortems of individuals dying of tuberculosis 10 per cent. were found to have tuberculosis of the kidney. In the treatment three methods have been advocated. First, general hygienic treatment, which is employed in lung tuberculosis; second, specific treatment with tuberculin; third, surgical treatment. General hygienic treatment is of great importance, as in all cases of tuberculosis. Fresh air, proper nutrition, and rest are of much value and should always be insisted on. Specific treatment with tuberculin is at present on trial. Regarding the surgical treatment, primary nephrectomy for early unilateral kidney tuberculosis can be done with less than 10 per cent. of mortality. In Kümmel's last series of 69 cases the mortality was only 2.7 per cent., and with the prospect of curing about 80 per cent. of the patients. In the light of present knowledge we must conclude that in unilateral renal tuberculosis early nephrectomy is the best treatment. This should be combined with the well-recognized hygienic treatment of tuberculosis. In bilateral renal tuberculosis the treatment should be hygienic plus possibly specific treatment with tuberculin until at least its value has been proven or disproven, and, when especially indicated, such palliative, surgical measures as nephrotomy and drainage.

DISCUSSION

Dr. L. L. McArthur: Tuberculosis of the kidney, like the acute infections, is usually unilateral. It has been my experience to find tuberculosis of the kidney much more frequently on the left than on the right side, and all my cases, except two, have been in females. Removal of the tuberculous focus in the kidney will most frequently cure the tuberculosis of the ureter and bladder. I have observed a number of times that the mere removal of the tuberculous kidney has sufficed to relieve the bladder condition. In a case in which a bilateral tuberculosis obtains, as shown by segregation of the urine and the detection of tubercle bacilli, the vaccine treatment offers as good prospects of results as any treatment yet advised.

Dr. M. L. Harris: I have operated on several patients with bilateral tuberculosis with increasing favorable results. Tuberculosis of the kidney is usually a unilateral affection, and it only becomes bilateral at some subsequent period. In that case there must be a time when bilateral tuberculosis occurs, when one kidney is more extensively involved than the other, and if we get a case when the second kidney is not extensively implicated the removal of the kidney which is the more extensively involved will result in a cure. A patient from whom he removed the kidney on one side over three years ago for extensive bilateral tuberculosis is still well and in a good state of health. He does not take the doleful view of bilateral tuberculosis that he formerly did.

Dr. A. H. Ferguson: In a case of tuberculosis of both tubes, with tubercle bacilli coming from the kidneys, when the tuberculous tubes were removed, the tubercle bacilli from the kidneys disappeared. It is possible to have tubercle bacilli in the urine without the kidneys being involved, consequently a careful examination should be made of the different organs for a primary tuberculous focus.

Dr. A. J. Ochsner: I agree with Dr. Harris that in a number of apparently hopeless cases—cases of bilateral tuberculosis of the kidney—the patients have recovered and have remained well for many years after the removal of the more extensively involved kidney. This fact has induced me to look on these cases in a more hopeful way than formerly.

Dr. Victor J. Baccus: Two years ago Albarran reported his experience and observation in eight cases in which albumin was found in the urine of the remaining kidney in renal tuberculosis. The amount of albumin found in the urine varied from 0.5 per cent. to 0.75 per cent. The kidney although secreting albumin, did not show by the urine any pathologic changes, and the patient was in perfect health. This may be explained on the basis that the kidney, although not tuberculous, has been injured by the toxin of the diseased kidney, and has never regained its primary physiologic function.

Dr. Emil Ries: The only case of bilateral tuberculosis of the kidney in which I obtained anything like a favorable result was one in which I operated nine years ago. In this instance, there was tuberculosis of the bladder and extensive tuberculosis of one kidney. One kidney discharged quantities of pus and tubercle bacilli. From the other kidney there came turbid urine, but only a few tubercle bacilli and a small quantity of pus. I removed the badly diseased kidney with the ureter down to the bladder. The patient never had completely clear urine, but was nevertheless able to attend to her work and to enjoy life.

Dr. L. Feingold: I do not think that, after removing the badly infected kidney, the apparent cure of the other kidney results from the fact of the diseased kidney having been removed, but that tuberculosis being a slow chronic infection, the comparatively healthy kidney undergoes a compensatory hypertrophy and becomes accustomed to doing the work of both kidneys.

Dr. Gustav Kolischer: One of the primary symptoms in tuberculosis of the kidney is frequency of urination. This is especially true in young women and girls, and when this symptom is present in such patients and other symptoms can be excluded the physician should think of tuberculosis of the kidney. Another symptom is a change in the ureteral orifice, which has a slit or a cleft in it. Tuberculosis becomes a certainty if in the neighborhood of the ureteral opening ulceration or infiltration is found. Three years ago I made a diagnosis of tuberculosis of the kidney in a young girl by draining one kidney and finding the urine infested with tubercle bacilli, while the other kidney was apparently normal. I removed the tuberculous kidney, and the woman recovered, but a fistula remained. I saw the same patient in consultation. The family physician thought of all kinds of extensive operations which I did not advise. This woman was subsequently cared for by Dr. McArthur, who applied the vaccine treatment, with the result that the fistula closed inside of two weeks..

Acute Postoperative Dilatation of the Stomach and Duodenum

Dr. William E. Schroeder: Experimentally, I have been able to produce dilatation of the stomach on cadavers by slight traction on the mesentery. In the acute cases the onset is sudden. There is vomiting, pain and passage of flatus. The vomiting may be fecal. The abdomen is distended, especially in the epigastric region; succussion is present. The temperature rises; the pulse ranges from 145 to 160. Collapse may follow. In the chronic cases the onset is slower, but otherwise the clinical picture is the same as in the acute cases. The prognosis is bad, in that 70 per cent. of these patients die if left to themselves; with treatment they do much better. Treatment consists of rectal feeding, elevation of the foot of the bed and washing out of the stomach every three or four hours.

DISCUSSION

Dr. E. Wyllys Andrews: Since several members of the society have reported cases of postoperative dilatation of the stomach, and since the *résumé* given in 1895 of forty cases, they have all come to realize the appalling condition from its suddenness and from the fact that surgeons are more or less responsible for deaths which are preventable, not only general practitioners, but surgeons who let patients die on their hands. Perhaps sepsis plays a part in acute dilatation of the stomach, but this condition can not be distinguished always from postoperative ileus. If the condition is identically like that of postoperative ileus, clearly one can do very little harm, but may do good by washing out the stomach in every case of suspected postoperative ileus or acute dilatation.

Dr. A. E. Halstead: I have had two cases of acute postoperative dilatation of the stomach, both terminating fatally.

Dr. A. J. Ochsner: I recall a case of gastroenterostomy for pyloric obstruction due to cicatricial tissue formation following an ulcer of the pyloric end of the stomach, the patient having apparently recovered. Two or three days afterward, while sitting up, she suddenly complained of pressure, and immediately her pulse increased rapidly, and in an hour she was dead. Postmortem examination showed that a kink at the point of attachment of the jejunum caused closure and the stomach crushed the heart until the patient died of pressure on the heart. I have a standing order in the hospital now that if there is any distention of the stomach, any vomiting after operations, the stomach is to be washed out regularly.

Dr. L. E. Frankenthal: I wish to direct attention to the absence of feces in the vomit in cases of dilatation of the stomach. This is one of the chief differential signs, and should lead to an early recognition of the trouble.

PHILADELPHIA COUNTY MEDICAL SOCIETY

Regular Meeting, Jan. 27, 1909

The President, Dr. Frederick P. Henry, in the Chair

Pre-Columbian Syphilis in America

Dr. Francis D. Patterson: The origin of syphilis is of necessity shrouded in obscurity by reason of the failure in early times to differentiate not only between syphilis and gonorrhea, but also between syphilis and other skin diseases which simulate it. That venereal disease existed in Biblical times is verified by the many references to it in the Bible. Syphilis was unknown in Europe prior to the return of Columbus, according to Diaz de Isla, who was engaged in active practice in Barcelona in 1493. He found at Barcelona a number of the sailors from Columbus' fleet who suffered from the disease. The first remarkable discovery of evidences of pre-Columbian syphilis in the United States was made by Jones, whose report will be found in the contributions of the Smithsonian Institute for 1876. He describes the results of his investigations in mounds and graves in Tennessee, where he found numerous skeletons presenting the evidences of the ravages of syphilis. The skulls show the average Indian features and he believes them to be pre-Columbian specimens. All authorities are agreed that the bones most affected by syphilis are those most subject to trauma in the following order: the tibia, clavicle, cranium, ulna, sternum and ribs.

The Modern Treatment of Syphilis

Dr. H. M. Christian: I desire to enter a protest against the spirit of pessimism so prevalent in the profession regarding the curability of syphilis. I believe that syphilis occurring among the upper and middle classes in individuals endowed with good health and fairly good habits, if seen early in the secondary stage of the disease and promptly and properly treated, can be cured in the majority of cases. When tertiary symptoms have once developed a permanent cure can not be promised. In view of the general acceptance of the *Spirochæta pallida* as the cause of syphilis in cases in which it is absolutely determined to be present in a given lesion it may be well to begin the administration of mercury at once without waiting for the appearance of cutaneous manifestations. The chief methods of administering mercury in syphilis are: (1) Internal treatment; (2) inunctions; (3) hypodermatic medication. In 50 per cent. of the cases of syphilis benign in character, the internal administration of mercury for the first year and a half is all that is required, the preparations employed being the protoiodid gr. ⅓, mercury with chalk gr. 1 and the bichlorid of mercury, gr. 1/12. Of these the protoiodid is the most efficient. In cases in which the drug can not be tolerated by the mouth or in which prompt action is needed a course of from 20 to 30 inunctions daily with one dram of blue ointment should be employed. When it can be employed such a course is preferable at the outset of every case of syphilis. I have not yet been convinced of the utility of hypodermic medication in the routine treatment of syphilis. In the treatment of tertiary syphilis some preparation of iodin in combination with mercury still remains the popular and most reliable form of treatment. The claims made for atoxyl in the treatment of syphilis have not yet been clinically verified.

Syphilis in Its Relation to Nervous and Mental Diseases

Dr. Alfred Gordon: The relation of syphilis to nervous diseases may be direct or indirect. To the latter group belong the so-called parasyphilitic diseases, examples of which are seen in tabes and paresis. When the syphilitic poison produces a direct effect the result is either central syphilis, spinal syphilis or a more frequent condition, cerebrospinal syphilis. While mercury and iodids may yield satisfactory and sometimes admirable results, nevertheless too much reliance should not be placed on them. The general measures play an extremely important rôle in treatment of syphilitic affections of the nervous system. Favorable results are sometimes obtained when the treatment is begun in the earliest stages of syphilitic diseases. Preventive medicine is said to be the most important. The ravages produced by syphilis on the nervous system are to be dreaded, as it threatens the community with a population of imbeciles, idiots, epileptics, tabetics and paretics.

Medicolegal

Impending Paresis, Loss of Memory and Insanity

The Supreme Court of Missouri, Division No. 2, sustains, in the perjury case of State vs. Coyne, an assignment of error in the exclusion of evidence tending to prove that, down to a date recently before the alleged false swearing, the defendant apparently stood on the brink of paresis, and that his memory was wholly unreliable. The question was: Did the defendant have the right to show to the jury that he was in a condition bordering on paresis, or a partial paralysis affecting his muscular motion, due to a disorder of the central nervous system, and that this had so affected his memory that he was known in the ordinary transactions of business to forget one day what had occurred the day before or a week before? The court thinks that in ascribing the offer of this evidence to an attempt to prove insanity, either total or partial, the purpose of the evidence was misapprehended, and that an instruction in withdrawing it on that ground from the jury was erroneous.

The purpose of the testimony offered and excluded was not to establish that the defendant was insane, but that owing to disease and nervous disturbances he had evinced a great loss of memory, up to a certain date. This testimony was not for the purpose of showing that he was either wholly or partially unable to appreciate the moral or physical consequences of an act, but to show that his memory was wholly unreliable, and this not by himself, but by other witnesses who had occasion to observe his conduct independent of this charge. The court can not see any reason why it was not competent for the defendant to introduce this testimony as tending to show the jury that notwithstanding they might believe beyond all doubt that he did in fact solicit employment from certain persons to aid them in getting their ordinances through, still that owing to this failure of memory he did not recall and did not remember, at the time, these propositions to them. The indictment and the plea of not guilty tender the issue to the jury whether the defendant honestly believed, as he stated, or whether honestly he did not recall, those visits.

"Memory," says Sir William Hamilton, "is the power of retaining knowledge in the mind; the mental power of recognizing past knowledge." That men may and do have what is denominated unsound memories, although otherwise of sound mind, is a matter of common knowledge. It is most generally observable in persons of old age, who have lost the power to remember past events, but no one would class them as insane persons. That such a person might do an act and be perfectly conscious of it, and of its moral and legal effect, and yet forget it, the court takes it is not open to dispute. Of course, it would be for the jury to credit or discredit this testimony, and believe or not believe it, as it appeared reasonable or unreasonable to them; but the question here was one of the competency of the evidence.

Releases Relative to Opinions in Injury Cases

The Supreme Court of Iowa says, in the personal injury case of Mason vs. Chicago, Rock Island & Pacific Railway

Co., that it is elementary that a person who has suffered injury through negligence of another may for a valid consideration effectually release and discharge his right of action for damages. But an agreement of settlement or release, obtained from an injured person in the absence of independent counsel or advice, should be and will be scrutinized by the court with great care, and on proof of any fact or facts fairly tending to show fraud or unconscionable advantage in obtaining it, a finding by the jury which holds such settlement of no effect will not be disturbed. However, where a surgeon in the employ of defendant company gave assurances of an early recovery which proved incorrect, in the absence of some fact or circumstances justifying the conclusion that they were fraudulently made to deceive or mislead the injured man as to his real condition, and thus aid the company in obtaining an advantageous settlement with him, the fact that he relied thereon in executing the release afforded no ground in law for avoiding its effect. The court adds that it must not be understood as holding that expressions of professional opinion by a surgeon in the employment of a party charged with the responsibility for a personal injury, when made to the injured person for the purpose of inducing a settlement of his claim for damages may not constitute fraud and false representations, but the court does hold that to justify the conclusion of fraud something more must be shown than that the opinion or representation has been proved incorrect.

Tests and Declarations to Physicians

The Supreme Court of Illinois says that the case of Shaughnessy vs. Holt was brought by the plaintiff to recover for personal injuries alleged to have been sustained by her while a passenger in the defendant's elevator. One of the plaintiff's claims was inability to detect sensations on part of her left leg. Three physicians who testified for her, stated that they had made tests on her person by taking two test tubes, putting hot water in one and cold water in the other, and that they touched with the test tubes different parts of her skin, and she did not always answer correctly which tube was hot and which was cold; that there was a lack of sensitiveness in one leg; that such symptoms showed a deterioration of her nervous system indicating nervous prostration or neurasthenia. All of these physicians made their tests very shortly before the case was called for hearing, apparently for the purpose of testifying at such hearing. It was insisted by the defendant that this testimony was based on self-serving statements of the plaintiff, and was therefore incompetent and inadmissible. And the court holds that the admission of this testimony was reversible error.

It is the established rule in Illinois, the court says, that the declarations of the injured party in a case like this, when made as a part of the res gestae (essential circumstances of the case), or to a physician during treatment or on an examination prior to, and without reference to the bringing of, an action to recover damages for the injury complained of, may be introduced in evidence. The law admits in evidence the declarations of the injured party as to the physical condition given to a physician during treatment because it is presumed that the injured person will not falsify in his statements made to the physician, when he expects and hopes to receive medical aid, but no such presumption arises when he is examined by an expert for the purpose of giving evidence in a case about to be tried.

The res gestae referred to under this rule relates only to the main fact or transaction. This main fact in this case was the accident itself, and not the experiments as to the plaintiff's physical condition many months after.

Physician's Liability to Husband for Breach of Contract to Attend Wife

The Supreme Judicial Court of Massachusetts says that the question intended to be raised by the defendant's demurrer to the declaration, and the question principally discussed at the argument in the case of Sherlag vs. Kelley was whether, under an action of contract brought on the implied agreement of a physician with a husband to render necessary and proper medical care and service to his wife in her illness, a recovery can be had for the husband's loss of her society, care and comfort resulting from her death caused by the defendant's failure to perform his contract.

For many years it has been held in Massachusetts that, without a statutory provision, no recovery can be had for the death of a person, however wrongfully caused by another. The decisions exclude, as a ground of recovery, all elements of damage which arise solely from death.

But the whole subjet is now covered by statutes, of which some apply only to deaths caused by certain corporations or classes of persons, as railroad and street railway corporations, common carriers and employers of labor, and one is general, applying to all other corporations and persons. This last statute covers death by negligence, whether the relations of the parties are such that there is a breach of an express or implied contract, or whether the duty neglected arises outside of any contract. The remedy given by it is exclusive of any other in the cases to which it applies; and, if the present plaintiff had brought his action seasonably, he would have been entitled to a recovery under it.

If, through a breach of the defendant's contract, there was an injury to the plaintiff's wife that caused him damage, he could recover for it in an action of contract, notwithstanding that it finally resulted in her death. If he was caused additional expenses for her nursing, care and treatment by the defendant's failure to perform his contract, he was entitled to damages. The fact that his wife subsequently died from the same cause was immaterial.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Boston Medical and Surgical Journal

February 18

1 The Emmanuel Movement. C. D. Young, Rochester, N. Y.
2 Mutual Relations of Prosecuting Officers and Medical Examiners. H. Parker.
3 *Criminal Abortion. G. S. Taft.
4 *Aloin or Guaiac Test for Blood Depends Solely on the Iron Contained in Its Hemoglobin. W. F. Whitney, Boston.

3. **Criminal Abortion.**—Taft discusses House Bill 247, 1906, of the Massachusetts Legislature, with particular reference to what constitutes being an "accessory after the fact" and its relation to the professional secret. He points out that the question of the inviolability of disclosures by patient to a physician differs in different states (in Massachusetts the physician may be compelled to testify in court concerning them), but that, in any event, while a physician may be under no legal obligation to disclose what he might discover or suspect regarding abortion, and may take care of the victim, yet any action done to prevent the detection or conviction of the abortionist renders him an accessory. Such an action, for instance, is the destruction of the fetus, or of the catheter or other means used to procure abortion.

4. **Aloin or Guaiac Tests for Blood.**—Whitney discusses the chemistry of these tests, and concludes that the aloin and guaiac tests are not tests for blood, but simply for its iron, and are utterly valueless for suspected stains on any iron article, such as a knife, etc. Their chief value is a negative one.

Medical Record, New York

February 20

5 Prostatectomy. J. B. Deaver, Philadelphia.
6 *Case of Acromegaly with Thrombophlebitis of the Superficial Veins. J. Phillips, Cleveland, O.
7 Free Suppurative Peritonitis. A. E. Isaacs, New York.
8 Danger Signals in Inflammations of the Ear. W. A. Wells, Washington, D. C.
9 Paramyoclonus Multiplex (Friedreich). E. M. Van Buskirk and A. Kane, Fort Wayne, Ind.
10 Treatment of Amebic Infection. M. B. Saunders, Waco, Tex.

6. **Acromegaly.**—Phillips describes an interesting case of acromegaly which was accompanied by thrombophlebitis of the superficial veins. He discusses the subject in general and

the theories advanced as to the essential cause of acromegaly. Most observers believe it to be associated with alteration in the function of the pituitary body by way either of suppression, hypersecretion, or perverted function. The pathologic changes in the glands point quite strongly to the hypersecretion theory. His general conclusions are practically as follows: Enlargement of the heart, either simple or associated with a myocarditis, is the condition usually found in acromegaly. Sclerosis of the arteries and degenerative lesions affecting the walls of the veins, with dilatation and subsequent obliteration of their lumen, are constantly present. These changes in the heart and vessels should be considered as much a part of the clinical picture as the changes in the bones, and they are probably due to the prolonged hypertension of the vessels, the result of hypersecretion of the pituitary body.

New York Medical Journal

February 20

11 Is the Human Body Supplied with an Autoprotective Mechanism? C. E. de M. Sajous, Philadelphia.
12 Drugs That May Be Used with Benefit to Gynecologic Patients. H. H. Boldt, New York.
13 *Genitourinary Complications of Typhoid. E. J. G. Beardsley, Philadelphia.
14 Salivary Calculi, with Report of a Case. R. E. Davison, Pittsburg.
15 *Value and Reliability of Calmette's Ophthalmic Reaction to Tuberculin for Diagnosis of Tuberculosis and Differentiation of Tuberculous Lesions from Other Diseases in Infants and Young Children. E. M. Sill, New York.
16 *Starch in Urine, Amyluria. I. S. Wile, New York.
17 Asthma a Nasal Disease. J. H. Egbert, Willimantic, Conn.
18 Common Forms of Gastroenteritic Neuroses. Etiology and Treatment. A. Bassler, New York.
19 New Operation for Ingrowing Toenail. W. L. Keller, Manila, P. I.

13. **Genitourinary Complications of Typhoid.**—Beardsley enumerates and discusses the following genitourinary complications of typhoid: retention of urine, polyuria, albuminuria, pyuria, hematuria, hemoglobinuria, urobilinuria, bacilluria, infarcts and abscess of the kidneys, nephritis, pyelitis, cystitis, epididymitis and orchitis, oöphoritis and salpingitis, gangrene of the genitals, menstrual distrubances, abortion, miscarriage or premature labor, and mastitis.

15. Abstracted in The Journal, Nov. 7, 1908, p. 1626.

16. **Amyluria.**—Wile states that the presence of starch granules in the urine has been noted by various observers, and that the general opinion has been that the presence of these granules in the urine has been accidental, resulting from contamination by dusting powder, underwear, etc. He reports observations to disprove this theory and to establish the existence of a true amyluria, or the passage of starch granules through the kidney into the urinary secretion. He summarizes briefly the literature on the subject and gives the following résumé of his preliminary observations:

1. Starch granules are absent in the urine of breast-fed infants.
2. Starch granules are frequently present in the urine of infants fed on carbohydrate food.
3. The degree of amyluria varies with the nature and preparation of the food, the quantity ingested, and the condition of the individual.
4. Starch in urine at times gives a reaction simulating that of albumin.
5. Starch passing through the kidney may cause albuminuria with casts.
6. Amyluria does exist, and starch in the urine is not necessarily of extraneous origin.

Lancet-Clinic, Cincinnati

February 20

20 Indications for and Technic of Internal Urethrotomy. F. C. Valentine and T. M. Townsend, New York City.
21 Antiseptic Midwifery. E. J. Kehoe, Cincinnati.
22 Mixed Tumors of the Parotid Gland. A. H. Cordier, Kansas City, Mo.

Archives of Diagnosis, New York

January

23 Serious Heart Lesions without Persisting Physical Signs. H. L. Elsner, Syracuse.
24 *Early Diagnosis of Infantile Scorbutus. H. Koplik, New York.
25 Variations from Type in Surgical Diseases of Kidney. J. B. Deaver, Philadelphia.
26 Early Diagnosis of Tuberculous Affections of the Apices of the Lungs by Roentgenography. F. M. Groedel, Bad-Nauheim, Germany.
27 Malignant Disease of the Lung with Report of a Case of Primary Sarcoma. H. E. Lewis, New York.
28 Diagnosis of Carcinoma of the Esophagus by the Roentgen Rays. G. Pfahler, Philadelphia.
29 Differential Diagnosis of Malignant Disease of the Pancreas and the Biliary Tract. C. G. Cumston, Boston.
30 Diagnosis of the Presence of Predisposing Conditions Favoring the Establishment of Otorrhea. W. S. Bryant, New York.
31 Differential Diagnosis Between Neurasthenia and Some Affections of the Nervous System for Which it is Often Mistaken. T. A. Williams, Washington, D. C.
32 Hematomyelia, and a Case of Syringomyelia. A. A. Eshner, Philadelphia.

24. **Infantile Scorbutus.**—Koplik emphasizes the importance of early diagnosis of infantile scorbutus. The picture of the affection, as outlined in the text-books, is one which applies to cases in which the disease has gained full headway; the patient has suffered for some length of time and has developed the full symptomatology of the disease. The disease follows invariably in the wake of some error of nutrition, or, in artificially fed infants, on an error in the composition of the food, wholesome or otherwise, or in its treatment after having been made up for the infant. Cases also occur in breast-fed infants when the breast milk may have had a denutritional composition, or in infants partaking of raw milk, excellent in itself, but given to the infant in a denutritional state. This should always be borne in mind, as the physician is apt to reject the possibility of scorbutus if the infant is taking raw milk. Many infants taking sterilized food never develop symptoms of scorbutus, and in others symptoms may be held in abeyance by the administration of fruit juices. It is exceedingly uncommon to see the disease in infants before the age of 5 months. Koplik believes, therefore, that scorbutus may develop in any infant whose food is, or has been, constructed on denutritional lines. The first signs of latent or incipient scorbutus are a mild form of anemia, pain in the bones and joints only elicited by pressure or manipulation, and the appearance of blood in the excretions or in the vicinity of the bones or periosteum. It is not an uncommon experience to see scorbutus in infants, at about the sixth month of life, who are apparently thriving, and who give absolutely no symptoms such as would lead one to suspect any scorbutic tendency. In such infants the teeth may not have erupted. Deep pressure on the tibiæ will cause these children to wince, as if there were some tenderness of the bone. Formerly this was interpreted as being due to rickets. Such infants may be rachitic, but the tenderness in question is scorbutic. The test of the correctness of this supposition, in the face of the absence of any symptoms otherwise of scorbutus, is the rapid response of such infants to a change in the diet toward warding off the full development of scorbutus.

Archives of Internal Medicine, Chicago

January

33 Intestinal Lesions Caused by *Trichinella spiralis* in Rats. C. Frothingham, Boston.
34 *Use of Cerium Oxalate for Relief of Vomiting. G. Baehr and H. Wessler, New York.
35 Relations Between Bilirubinemia, Urobilinuria and Urobilinemia. L. A. Connor and J. C. Roper, New York.
36 *Pellagra and Pellagrins. J. H. Randolph, Chattahoochee, Fla.
37 Fever. W. G. McCallum, Baltimore.

34. **Cerium Oxalate for Relief of Vomiting.**—Baehr and Wessler discuss the widely prevalent use of cerium oxalate, the many years during which it has held a conspicuous place in the pharmacopeia, and the disagreement among physicians regarding its therapeutic value, and give in detail their experiments to determine its real worth. They carried out animal experiments (a) to determine the toxicity of cerium oxalate and the oxalates of lanthanum, neodymium, praseodymium and thorium; (b) to determine the effect of commercial cerium oxalate on vomiting induced with apomorphin hydrochlorid and ipecac; (c) to determine the effects of cerium nitrate on vomiting induced with apomorphin hydrochlorid; (d) to determine the general effects of cerium nitrate on the body and also of the paths of excretion of cerium from the organism. They arrived at the following conclusions:

1. Commercial cerium oxalate is non-toxic.
2. Cerium oxalate has no inhibitory effect whatever on vomiting of central origin.
3. Cerium oxalate may inhibit vomiting due to local irritation of the gastric mucosa, but only if given in large doses for some time, so as to coat the stomach wall pretty generally.
4. Cerium oxalate is not absorbed from the gastrointestinal tract.

These four propositions complete a very close analogy between cerium oxalate and bismuth subnitrate Both salts are insoluble, and, because of this property, neither is absorbed from the gastrointestinal tract This latter fact, in the case of bismuth, has resulted in its use for various disorders of the alimentary canal, but, so far as the literature furnishes any evidence, the use of cerium oxalate has been directed, in great part, against the reflex vomiting of early pregnancy, a condition in which no one would rationally think of using bismuth. It certainly seems reasonable to suppose that cerium oxalate ought to prove efficacious in alleviating all those conditions for which bismuth is at present used: in other words, those in which a protective coating to the wall of the viscus is desired. In this respect, its use is at present extending: for instance, some men find it efficient for relieving the irritability of the stomach in alcoholic gastritis, others for allaying the gastric disturbances that occasionally manifest themselves in the course of infectious diseases. There is no reason for doubting its value in these and similar conditions, such as gastric ulcer, in which the vomiting is due to a local irritation of the mucous membrane But in the doses that some men prescribe, 0 15 gm to 0.20 gm, it can hardly be hoped that it will prove efficient. In view of the manner in which it now appears that cerium oxalate accomplishes its purposes, namely, mechanically, by coating the wall of the stomach, these doses seem ridiculously small. Cerium oxalate ought to be administered in doses comparable to those in which bismuth subnitrate is given.

36 **Pellagra and the Pellagrins.**—Randolph defines pellagra as a systemic-intoxication, associated always with the ingestion of maize or maize products, and characterized by a triad of symptoms (gastrointestinal, cutaneous and neuropsychic), with marked tendency to seasonal recurrences, exhaustion and death The term "pellagrin" is applied to those affected with the disease, particularly when the mental or nervous symptoms predominate. Pellagrous insanity has been recognized as one phase of the symptoms in the course of the disease almost as long as the disease itself. Randolph goes at some length into the historical distribution of the disease, the etiology, pathology, symptomatology, diagnosis, prognosis and treatment. A typical case of the disease presenting the triad of symptoms, dermatitis, diarrhea and depression, occurring in a section where the disease is known to prevail, and where the history of a maize diet can be established, should present no difficulty: but in the prodromal stage, or when the cases are ill defined and atypical, the matter may not be so easy. He discusses in detail the differential diagnosis from mild alcoholic intoxication; ankylostomiasis; skin lesions of various kinds, especially pemphigus, eczema and dermatitis venenata; ergotism, and pseudopellagra He takes up also the differentiation of pellagrous insanity from dementia præcox, manic depressive insanity and the various so called terminal dementias which may lead to confusion from the psychiatric standpoint. Treatment is prophylactic and curative Of the latter little can be said, as there is no known specific medicinal agent for this disease. Removal from unhygienic surroundings and improvement in diet are the best means of combating the condition Milk, externally and internally, was used by the earlier practitioners, following the observations of Bouchard, that the cowherders in pellagrous districts escaped the disease Arsenic and iron preparations have been much used, and potassium bichromate, alone or combined with corrosive sublimate (Hoch), has been said to give good results Iodin undoubtedly exerts a beneficial influence on the cutaneous symptoms if applied in early stages of erythema Hydrotherapy is of much service in the treatment of the mental and nervous condition. Silver nitrate has been found a valuable adjunct in the treatment of the stomatitis, but for the diarrhea little of value has been found, although opium in some form is generally used in efforts to control the same. Recently protargol has been recommended in doses of one-third gram daily The serum treatment also has been tried, but further work along this line is needed and no doubt will be awaited with great interest. The author reaches the following conclusions:

1 Pellagra undoubtedly exists in the United States
2 Whites are more susceptible than blacks (This conclusion seems justified by the fact that in the institution from which these reports are taken all—both white and black—are under a common régime and partake of a common diet with similar hygienic conditions for both, so each race may be considered subject to the same etiologic factors, and the incidence of the disease has been 3 or 4 in the white to 1 in the negro
3 The sexes seem equally affected While the cases here reported are all from among the men yet there have been an equal number of cases observed among the women, on which we may hope for a report in the future when inferences may be drawn as to the resistant power in the respective sexes
4 Previous alcoholic history affected the prognosis badly
5 Mental and nervous symptoms prevail throughout the disease.
6 The disease is difficult to diagnose in the prodromal stage
7 The mental symptoms are of polymorphous character, but the picture as a whole is undoubtedly one of a distinct disease, and a definite psychosis may with propriety be recognized in the symptoms of pellagrous insanity

Archives of Ophthalmology, New York

January

38 Analysis of Involuntary Eye Movements in a Case of Congenital Binocular, Lateral Nystagmus, from Photographic Records R Dodge and A R Diefendorf, New Haven, Conn
39 Histologic Investigation of a Case of Blepharoconjunctivitis Caused by the Diplobacillus of Morax Axenfeld. B Pusey, Chicago
40 Replacement of Incarceration of the Iris by Traction from Within the Anterior Chamber P C Jameson, Brooklyn, N Y
41 Rhinogenous Optic Neuritis M. Paunz, Budapest, Austria
42 Rare Bacteriologic Conditions in Ulcus Serpens Dr zur Nedden

Archives of Pediatrics, New York

January

43 *Report on One Thousand Tuberculin Tests in Young Children. L E Holt, New York
44 Tics and Their Treatment E W Scripture New York
45 Leontiasis Ossea Developing in a Child with Diabetes Insipidus and the Problem of Etiology L C Ager, Brooklyn.
46 Calorimetric Method of Infant Feeding T. Termer, Newark, N J
47 *Diagnostic Value of the Chemical and Bacteriologic Examination of Cerebrospinal Fluid A Hand Philadelphia
48 Urinary Infection—A Common Cause of Fever in Infancy and Childhood M J Lippe, St. Louis

43. Abstracted in THE JOURNAL, July 11, 1908, p. 157.
47. Abstracted in THE JOURNAL, July 4, 1908, p. 65.

Monthly Cyclopedia and Medical Bulletin, Philadelphia

January

49 Practical Suggestions in Administration of Tuberculin, Together with Discussion of Theory on Which its Action is Based F M Pottenger, Monrovia, Cal
50 Some Reflex Neuroses Cured by Treatment of Coexistent Nasal Affections. M F Butler, Philadelphia
51 Use of Tobacco by the Immature J B Huber, New York
52 Congenital Unilateral Hypertrophy, Report of Case C H. Muschlitz, Philadelphia
53 Is the Human Body Supplied with Autoprotective Mechanism? New Theory [illegible] the Ductless Glands C E de M
54 Medical Missio[illegible] P. I
55 [illegible] osis of Enlarged Prostate H M.
56 [illegible] in Bassini Operation for Radical [illegible] Place, Philadelphia

Wisconsin Medical Journal, Milwaukee

January

57 Present Status of Medical Expert Testimony on Insanity A Plea for Corrective Legislation A Rejoinder. E P. Vilas,
58 [illegible] nd Treatment of Acute Chorea G H.
59 [illegible] ical Society E Quick, Appleton, Wis

Journal of the Indiana State Medical Association, Fort Wayne

January

60 Sketches of the Medical History of Indiana G W. H. Kemper, Muncie
61 Plea for the Use of National Formulary and Pharmacopeia Preparations F. H Carter, Indianapolis, Ind
62 *Chronic Myocarditis R H Ritter, Indianapolis
63 Treatment of Diabetes G D Kahlo, French Lick, Ind

62. **Chronic Myocarditis.**—Ritter divides the causative influences of this condition into the four following groups:

1 Mechanical Persistent demands which necessitate all the power of the heart mucle to meet the demand constantly can hardly fail sooner or later to use up the resources of the muscle, produce true fatigue, and perhaps through impaired powers of metabolism degenerative changes come on and the muscle fibers are replaced by fibrous tissue This cause however, is so closely related to or accompanied by bad habits or insufficient food supply that its purely individual importance is hard to estimate
2 Those cases in which the blood supply of the heart is insufficient for its proper maintenance
3 Perhaps the most common and most important of all the causes are the metabolic disturbances in the muscle fibers produced by the constant presence in the blood of toxins or the presence for even a comparatively short time of some very virulent poison

4. Extension of inflammation into the myocardium from endopericardium and pericardium.

General vascular sclerosis, while one of the almost constant accompaniments of chronic myocarditis, is not easily classified.

Journal of Advanced Therapeutics, Rahway, N. J.

January

64 The Static Brush Discharge Concentrated to a Blue Pencil Point, and Some of Its Uses. F. deKraft, New York.
65 Possibilities of Radiant Light. T. D. Crothers, Hartford, Conn.
66 Bilateral Pleurisy Following Carcinoma of Breast. H. F. Pitcher, Haverhill, Mass.
67 Severe Pain During Menstruation Treated with Static Wave Current. W. T. Patch, Boston.
68 Results Obtained from the Use of the Blue Light. A. B. Dorman, Winthrop, Mass.
69 Cataphoric Operations as Modified by the Topographic Situation of Particular Neoplasms. G. B. Massey, Philadelphia.

Illinois Medical Journal, Springfield

January

70 Abuse of Medical Charities in Chicago. C. J. Whalen, Chicago.
71 Charitable Carpentry Movement of "Ogacihc." E. L. Kenyon, Chicago.
72 Psychotherapy. G. A. Fuson, Harrisburg, Ill.
73 *Treatment of General Peritonitis Complicating Appendicitis. D. N. Eisendrath, Chicago.
74 Public Duties of Physicians. H. B. Hemenway, Evanston, Ill
75 Clinical Types of Toxemia of Pregnancy. J. G. Campbell, Chicago.
76 Eclampsia. G. J. Hagans, Chicago.
77 *Toxemias of Pregnancy. Renal Insufficiency. A. G. Bosler, Chicago.

73. Abstracted in The Journal, June 13, 1908, p. 2015.

77. **Toxemias of Pregnancy.**—Bosler discusses in some detail the part played by renal insufficiency in the toxemias of pregnancy. *He states that uremia and eclampsia are separate* and distinct conditions, uremia implying a permanent discontinuance *of renal functions and leading to fatal termination*; eclampsia is not *per se* fatal, and recoveries are frequent and the changes of *pregnancy kidney* undergo resolution with complete recovery. Pregnancy, he asserts, does not produce a true nephritis. *The pregnancy kidney* is an acute fatty infiltration, a secondary consideration, due in all probability to the underlying toxemia. Kidney involvement with insufficiency as an etiologic factor in the production of toxemia and pregnancy has been overestimated. Hepatic insufficiency is more important and liver changes are more constant and characteristic than renal, and both depend on the underlying toxemia. The exact nature of this toxemia is not known, and many theories have been advanced in explanation. To Bosler there seem to be two factors: first, predisposing, and, second, exciting. The predisposing factors should be mentioned individually, with all the term implies, heredity, diathesis, etc., the liability of the individual to disarrangement, functional or otherwise, of certain organs of the body, especially the liver. Whatever the underlying predisposing condition in the individual, the exciting cause seems to be the impregnation of the ovule. With the growth of the ovum there is a marked change in the metabolic processes of the body, and increased activity of various organs, especially the liver. This occurs in all gravidæ and is physiologic. In any given case these physiologic changes, passing beyond a certain point, become pathologic. The liver, governing in a great measure the process of metabolism, is usually an overworked organ, and in pregnancy has an added burden, not only of increased metabolism on the part of *the mother, but* of caring for the nutrition and waste of the fetus as well. It is reasonable to presume that this excessive *stimulation* can and does lead to structural changes, seriously impairing the hepatic function. As a result we have perverted metabolic products, which, Bosler believes, constitute *the* basis of the tox*emia*.

California State Journal of Medicine, San Francisco

January

78 Skin Reaction After the Use of Tuberculin Ointment. H. E. Alderson, San Francisco.
79 *The Rose-Bradford Kidney. H. d'A. Power, San Francisco.
80 German Measles. E. Gray, Eldridge.
81 Bier Treatment in Surgical Diseases. A. W. Morton, San Francisco.
82 Intestinal Paralysis. E. G. McDonnell, San Francisco.
83 Question of Operative Interference in Acute Appendicitis. T. H. Blodgett, Tulare.
84 The Railway Hospital Association, Its Aims and Purposes. J. R. Colbu[illegible]n, Los Angeles
85 Treatment of Traumatic Rupture of the Urethra. R. Brown, Santa B

79. **The Rose-Bradford Kidney.**—Power discusses the special form of fibrotic kidney, inflammatory in origin, having a *pathology distinct from the granular contracted kidney of* later life and presenting a quite distinct clinical evolution which is found in young subjects. This condition is linked with the name of Rose-Bradford, who described it in the Croonian lectures (*Lancet*, Aug. 6, 1904). Power quotes Rose-Bradford's description of the morbid anatomy and abstracts the symptomatology from Robson's paper in the *Practitioner*, February, 1908, which is recapitulated as follows: The disease occurs in young adults, and is markedly latent. Polyuria with much albumin, absence of edema, cardiovascular and fundus oculi changes, with a *fatal termination* from acute uremia, complete the story. He describes two cases, both in young women, 23 years of age, death *occurring* from uremic eclampsia in both cases. In discussing their origin, Power asks the following questions: *What is their etiology? Are they due to autogenous toxins, to infection, or to an unrecognized* lesion of the kidneys? *Are the changes in other organs* primary or coincident, or may not the kidney lesions themselves be *secondary to a morbid condition elsewhere, to* an affection of one of the internal secretions or some lack of *adjustment in the chemical inter-relations of the body*, such as may result from deficiency or excess of known or unknown *hormones? Why is the condition so long latent and* so sudden in its termination? He suggests an underlying *blood-carried toxin as the cause, and thinks that we can* easily understand the cause of the sudden termination if we *look on the functional capacity of the kidney as being greatly* in excess of the ordinary demand. With the progressive destruction of the secreting or excreting structures, this reserve is gradually called on and exhausted, but so long as any excess *remains no retention toxemia can occur.* Directly that margin is overstepped, the blood becomes rapidly surcharged with *the products of metabolism*, which, *in their turn*, act on the kidney protoplasm, increasingly depressing its eliminative power and thus by *action and reaction leading to a rapidly* accelerating abolition of all activity.

Western Medical Review, Omaha, Neb.

January

86 First Aid in Fractures. A. B. Anderson, Pawnee City, Neb.
87 Fractures: Symptoms and Diagnosis. S. C. Brede, David City, Neb.
88 The X-Ray in the Diagnosis and Treatment of Fractures. J. P. Lord, Omaha.

Journal of the Medical Society of New Jersey, Orange

January

89 Review of Ninety six Cases of Endothelioma of the Pleura. H. S. Patterson, New York.
90 Results of *Injuries to the* Skull. A. J. Walscheid, Union Hill.
91 Affections of the Ear Due to Adenoids. N. L. Wilson, Elizabeth.
92 Acute, Perforating, Gastric and Duodenal Ulcers. (*Concluded*) E. Eliot, New York.

St. Paul Medical Journal

January

93 Importance of Caring for and How the State of Minnesota Cares for Its Indigent Children Suffering from Tuberculosis of Bones and Joints. A. J. Gillette, St. Paul.
94 Milk and Meat Inspection. A. O. Bjelland, Mankato, Minn.
95 Gastrointestinal Influenza. M. M. Ghent, St. Paul.
96 Acute Maniacal Excitement in a Patient Eighty-two Years of Age; with a study of the Possible Relation of Blood Pressure to the Condition. C. E. Riggs.
97 Expense of Illness of the Consumptives Who Died in Minnesota in 1907, and How It Was Distributed. C. Easton St. Paul.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

February 6

1 Forms of Jaundice Capable of Relief or Cure by Surgical Treatment. A. W. M. Robson.
2 *Early Cardiac Inadequacy. L. Williams.
3 Neurologic Fragments. J. H. Jackson.
4 Case of Blood Crisis Occurring in Lardaceous *Disease*. T. S Kerr and E. I. Spriggs.
5 Treatment of Empyemata. G. E. Waugh.
6 Single and Successive Extrasystoles. T. Lewis.
7 Two Cases of Hypertrophic Pulmonary Osteoarthropathy. H. E. Symes-Thompson.
8 Excision of One Kidney with Quantitative *Analysis* of Urine. A. P. Dodds-Parker and E. P. Poulton.

9 Shellfish Typhoid Fever. H. C. Pattin.
10 Comparative Measurements of the Lives of Leucocytes When the Cells Are Resting in the Plasmata of Different Persons. H. C. Ross.

2. **Early Cardiac Inadequacy.**—Williams states that, strictly speaking, the heart may be described as inadequate whenever any of Gaskell's five essential functions become impaired: these are rhythmicity, excitability, conductivity, contractility, and tonicity. At present tonicity is of such clinical importance that when cardiac inadequacy is mentioned impaired tonicity is meant. The first result of this condition is dilatation, so that it is by the signs and symptoms of dilatation that we have to recognize that the heart is no longer equal to its task. Williams thinks that, although palpitation seldom indicates cardiac disease, it invariably denotes cardiac distress. He discusses the causes of palpitation, both mechanical from digestive disturbances and from emotion. A form of cardiovascular disturbance which is often difficult to appraise at its true value is tachycardia, which may be due to nervous influences or to position. Heart hurry in the upright posture, subsiding in the recumbent, is a common symptom in adolescents soon after puberty, in convalescence from acute or debilitating disease, and in neurasthenia. The manometer shows that this condition is invariably associated with subnormal blood pressure, and albumin will almost always be found in the urine. Tachycardia which occurs when the patient is laid on his back is of a different significance. It is the reverse of the normal response and the exact meaning of the phenomenon is not clear. Williams believes that it is due to hyposystole. A symptom of cardiac inadequacy which frequently escapes the attention it deserves is edema of slight degree. Toward the end of the day or after a long walk there will be slight, though definite, pitting over the tibia just above the ankles, which disappears after a night's rest. During the period of repose, however, the urine which had been normal in quantity or scanty during the day shows a decided increase, showing that the tone of the heart, though inadequate to the exigencies of the erect posture, is, nevertheless, capable of fully maintaining the circulatory needs of the recumbent posture. The edematous accumulation of the day is thus fully excreted at night. Williams refers to Widal's work in connection with the production of edema by undue consumption of salts. This edema, which is at first visceral and deep seated, soon becomes general unless the ingestion of chlorids is restricted. Recently Etienne, of Nancy, has shown that even in very old people cardiac equilibrium which, on an ordinary diet, is on the verge of breakdown can be completely re-established by carefully regulating the amount of ingested chlorids.

In the examination of the heart, the question of the size is of first importance. In a patient in whom the blood pressure has been unduly high for several months, a left ventricle normal in size is of bad prognostic omen. Gross valvular lesions with agitating thrills and clamorous murmurs are compatible with complete adequacy of function and do not of themselves constitute any indication either for heroic treatment or for alarmist prognosis. Valvular lesions indicate a certain degree of cardiac crippling, and it must be remembered that, as the French say, "a lesion of the orifice is not a disease of the heart." Williams states that even in the absence of gross murmurs and arrhythmia the attentive ear will frequently detect sounds which tell of dangers ahead. The first of these is accentuation of the second sound. Another is the reduplicated second sound at the apex, which is now generally admitted to indicate an early stage of mitral stenosis. So far as treatment is concerned Williams states that the greatest and most urgent indication is to rid the system of the vasoconstrictor toxins which are accumulating in the blood, and this is to be effected by hygienic and dietetic rather than medicinal treatment. When the fault lies primarily in the myocardium, rest in bed, combined with cardiac tonics, such as digitalis, and diuretics are all important. More important still, in the treatment of cardiac inadequacy, is the prescription of that which all too frequently proves to be but very partially attainable, namely, the philosophic calm which is begotten of perfect tranquillity of spirit.

British Medical Journal, London

February 6

11 *Radium in Surgery. Sir F. Treves.
12 Human Glanders. J. M. Bernstein and E. R. Carling.
13 Anesthesia with Known Percentages of Chloroform. N. H. Alcock.
14 Atrophic Rhinitis Complicated by Mastoid Abscess. F. Stoker.
15 Edema with Resolution by Urinary Crisis. H. D. Rolleston and F. L. Golla.

11. **Radium in Surgery.**—Treves first reviews the uses and limitations of the *x*-ray, the high-frequency current, and the Finsen light, and then enumerates the conditions in which radium has been found useful. He names angiomata, rodent ulcer and epithelioma, and states that the results in the cases treated are apparently permanent. He describes the alpha, beta and gamma rays often given off by radium, and says that in regard to general qualities the alpha rays may exist alone. Alpha and beta rays are absolutely distinct and independent, and can exist the one without the other. The beta and gamma rays are inseparable; they are never found dissociated. The alpha rays are supposed to give off heat and they burn; they are capable of producing a very troublesome ulcer of the skin. The penetrating power of the three varieties of rays is expressed as follows: Taking the penetration of the alpha rays as 1, they are stopped by a sheet of mica. The beta rays have a penetrating power of 100 and will pass through a centimeter of lead. The penetration of the gamma rays on the same basis would be presented by 10,000, and they will pass through one inch of steel. In regard to radium treatment of disease, he stated that the main feature of the application is surface. It is ridiculous, he asserted, to attempt to apply radium as a broken-up bead in a glass tube, without any notion of the amount of the different rays being used or how far the radiation extends. A little radium spread over an even surface is much more powerful and can be much more accurately used than a bead of the radium in a glass tube. Radium must be ordered by a definite prescription. For the individual case a plate of certain diameter is ordered and the proportion of alpha, beta and gamma rays required will be stated in the prescription. It may be necessary to cut off a certain proportion of the alpha rays, and this is done by means of an aluminum plate of definite thickness. The distance is also regulated to suit the individual case. Treves touches briefly on the subject of radioactivity. In the future investigation of radium, it is essential, first, to ascertain the action of the radium rays and of the emanation on bacteria and their products. In the next place, the selective action of the radium on certain tissues must be studied. Little has yet been done, except by Dr. Dominici, to ascertain the effect of introducing radium into the substance of a growth in a tube permeable to its rays, such as a tube of thin aluminum, and so far as he has investigated the matter the results have been encouraging. Then come the questions of the effect of the emanation if inhaled, the effect of injection into the diseased parts of a solution of the emanation, the utility (if any) of radioactive water and other substances rendered potent by radium. Treves warns against raising false hopes for the potentialities of a little known remedy.

Medical Press and Circular, London

February 3

16 Simultaneous Existence of Congenital and Acquired Heart Disease. A. Dietrich.
17 *Radium in Surgery. Sir F. Treves.
18 Infantile Mortality as Seen in a Children's Hospital. D. Forsyth.
19 Gonorrheal Diseases of the Eye. S. Stephenson.

17. See abstract No. 11.

Clinical Journal, London

February 3

20 Treatment of Syphilis by Arylarsonates. J. E. Lane.
21 *Muscular Rheumatism. W. Murrell.
22 Recurrence After Operation for Radical Cure of Inguinal Hernia. W. H. Battle.

21. **Muscular Rheumatism.**—Murrell defines muscular rheumatism as a chronic painful affection of the white fibrous tissue connected with the muscles and implicating the aponeurosis tendons, fibrous septa, fasciæ, and adjacent periosteum. Though the disease is sometimes spoken of as myalgia, the two conditions are not identical. The seizure *generally*

comes on suddenly and commonly attacks middle-aged people, especially those of gouty tendencies. There is little or no constitutional disturbance and little, if any, elevation of temperature. Conditions which may be mistaken for muscular rheumatism are myalgia, lumbago, indurations or nodule formation of the fibrous tissues, pleurodynia, rheumatic torticollis, and the pain attending the onset of many of the acute febrile diseases. As instances of the last-named conditions he cites the well-known pains of malaria, dengue and beriberi. Some cases of so-called muscular rheumatism, he states, are due to localized neuritis, which may be alcoholic in origin, but are more frequently the result of an old and imperfectly treated syphilis.

Quarterly Journal of Medicine

January

23 *Hysterical Paroxysmal Edema. F. H. Edgeworth.
24 The Venous Pulse in Paroxysmal Tachycardia. J. Cowan, D. McDonald and R. I. Binning.
25 *Effect of the Administration of Calcium Salts of Citric Acid on the Calcium Content and Coagulation Time of the Blood. T. Addis.
26* Congenital Family Cholemia. H. P. Hawkins and L. S. Dudgeon.
27 Cardiovascular-Respiratory Murmur and Its Relationship to Other Physical Signs. T. Lewis.
28 Prodromal Rashes of Smallpox. R. S. Thomson and J. Brownlee.
29 Speed Limit of the Human Heart. A. F. Hertz and G. W. Goodhart.
30 Chronic Infectious Endocarditis. W. Osler.
31 Pathology of Uremia. F. Golla.

23. **Hysterical Paroxysmal Edema.**—Edgeworth reports seven cases and analyzes them. He sums up by saying that the evidence recorded suggests that cases of paroxysmal edema may be divided into two categories, those of Quincke's edema and those of hysterical origin. The former are allied to Henoch's erythema, the latter to hysterical chronic edema. The former are probably due to some blood change, the latter to some disturbance in the central system.

25. This article will be discussed editorially in The Journal.

26. This article will be discussed editorially in The Journal.

Journal of Tropical Medicine and Hygiene, London

February 1

32 Methods Employed in Combating Disease Among Coolies in Assam. J. D. Gregorson.
33 Pulmonary Bilharziosis. G. A. Turner.
34 Biliary Cirrhosis of Children, Otherwise Known as Infantile Liver. F. Pearse.
35 Avian Hemoprotozoa of the Genus Leucocytozoon. L. W. Sambon.
36 Hemogregarines of Snakes. L. W. Sambon.

Bulletin de l'Académie de Médecine, Paris

January 19, LXXIII, No. 3, pp. 95-133

37 Marmorek's Serum in Tuberculosis. (De quelques nouveaux documents relatifs au traitement de la tuberculose par le serum de Marmorek.) C. Monod.

Lyon Chirurgical, Paris

February, I, No. 4, pp. 333-452

38 *Scoliosis from Primary Lumbar Malformation. P. Vignard and G. Monod.
39 *Goiter of Parathyroid Origin. L. Bérard and H. Alamartine.
40 *Congenital Hour-glass Stomach. (A propos de l'estomac biloculaire congénital.) R. Leriche.
41 *Mobilization *en Masse* of Colon on Left Side. (Mobilisation en masse du colon gauche.) P. Cavaillon and A. Chalier.

38. **Scoliosis from Primary Lumbar Malformation.**—This illustrated article discusses the deformity in the lumbar region that may result from traumatism, an inflammatory or trophic process or from disturbance in development. When the fifth lumbar vertebra is abnormal, there is a lateral slope and torsion with asymmetrical abnormal resistance, as Monod describes in detail. Treatment should be removal of the cause (tuberculosis, nutritional disturbance, chloro-anemia or prolonged convalescence from an infectious disease) and immobilization in a plaster bed in the dorsal decubitus position, with or without longitudinal extension. Later, simple gymnastic exercises and the use of a seat sloping up on one side should be advised. When the compensating curvature is already formed and more or less fixed, immobilization is also the main reliance. After a few weeks the spine becomes supple and relaxed, favoring restoration to normal. The latter does no good, however, unless the primary displacement is corrected and kept corrected.

39. **Parathyroid Goiter.**—The case described shows the possible existence of islets of parathyroid tissue in the thyroid gland, similar to the aberrant suprarenal cells responsible for intrarenal hypernephroma. The fetal adenoma in this case was removed from a woman of 43 presenting symptoms of mild exophthalmic goiter. The goiter was first observed at puberty, but it began to increase in size with the menopause.

40. **Congenital Hour-glass Stomach.**—Leriche has examined 100 fetuses and has never found a trace of anything suggesting hour-glass stomach in the slightest degree.

41. **Mobilization of the Left Colon.**—Cavaillon and Chalier give an illustrated description of a technic worked out on the cadaver for extirpation of the sigmoid flexure and rectum by an abdomino-perineal operation; it includes mobilization of the splenic angle and left colon. The authors refer in a footnote to an article in The Journal (Feb. 15, 1908, page 573) advocating much the same technic. It permits the intestine to be rendered permeable by re-establishing its continuity without the necessity for an artificial anus.

Presse Médicale, Paris

January 23, XVII, No. 7, pp. 57-64

42 *Comparative Value of Different Technics for Pubiotomy. (Hébotomie.) C. Jeannin.
43 *Mental State of the Survivors of the Sicily Earthquake. (L'état mental des sinistrés de Sicile.) P. Hartenberg.
44 **Action of Salt in Gastric Digestive Disturbances.* (Action du chlorure de sodium sur les troubles de la digestion stomacale.) N. Floresco.

42. **Pubiotomy.**—Jeannin discusses the different methods and declares that the subcutaneous is too dangerous, although it is preferred in Germany. The Calderini flap gives more ample access with less predisposition to hernia than the other technics.

43. **Mental Condition of the Survivors of the Sicily Earthquake.**—Hartenberg remarks that the conditions of the catastrophe were peculiarly distressing. The earthquake occurred during the night, surprising the people in their sleep, while the pouring rain and the cold added discomfort to the horror; then the extent of the destruction apparent as day dawned, the grief for relatives and for loss of property combined with the pains of the wounds and later with hunger, thirst, the sight of the hundreds of corpses and the constant apprehension of new quakes, combined to constitute a series of the most intense impressions that man is capable of experiencing. After the first agony of suspense, people began to run, straight ahead and without aim, oppressed by panic terror, an atavistic relic of those flights of primeval man before burning forests and inundations; half-clad men and women ran screaming across the country. Many of the wounded did not feel the pain of their wounds during these first hours. One man with several wounds and fractures ran for hours without knowing that he was injured. After the first stage of panic came scenes of savagery in the instinct of self-preservation, but in the midst of these scenes instances of devotion and heroism were observed on all sides, the desperate efforts of many severely wounded resulting in the saving of numerous lives. Besides the praying multitudes, others were found praying to the titans that are supposed to live in the depths of the crater of Mount Etna—a survival of legendary traditions from the days of Homer. Numerous cases of insanity are encountered, but the experts regard them as probably curable. There were many instances of the supreme pathologic reaction, that is, suicide, single and of whole families. The commander of a ship anchored in the harbor saw with his telescope numbers of groups of people, men, women and children, join hands and jump from the docks into the sea.

44. **Action of Salt on Disturbances of Gastric Digestion.**—Floresco states that salt not only is the source of the hydrochloric acid of the gastric juice, but has a local action on the mucosa of the digestive tract and also a general indirect

action on the gastric secretion from the impregnation of the tissues and juices with the sodium chlorid. He describes experimental research which shows that disturbances in the gastric digestion (vomiting, regurgitation and dyspepsia) are influenced and arrested by eating bread sprinkled with salt. The reaction of the stomach content is alkaline in these conditions, and the salt transforms the reaction by the production of gastric juice and, by its local and general action, it closes the cardia by reflex action. He describes the mechanism of vomiting and of seasickness, etc., and relates experiences which seem to show that it is possible to arrest these disturbances by this simple measure of eating bread sprinkled with salt It has proved invariably effective in his experience, overcoming the muscular, circulatory and respiratory phenomena which cause the vomiting.

Centralblatt fur die Grenzgebiete der Med. und Chir., Jena

December 31, XI, No 24, pp 929-980

45 *Action of General and Spinal Anesthesia on Kidneys and Urinary Secretion (Einwirkung der allgemeinen Narkose und der Spinalanalgesie auf die Nieren und ihr Sekret) M Hirsch (Commenced in No 20)
46 *Kidney Affections During Pregnancy (Erkrankungen der Niere in der Graviditat) R. Pollak. (Commenced in No 12

45. Action of Anesthetics on the Kidneys and Urinary Secretion.—Hirsch analyzes 207 articles that have been published in late years bearing on this subject It seems evident that the effect of chloroform and ether on the kidneys is merely one manifestation of a general intoxication of the system from the drug. The old theory of a delayed toxic action on the kidneys has been sustained by recent research which has revealed degeneration of the parenchymatous organs throughout, but most prominent in the kidneys. He discusses the mechanical, contact, toxin and blood theories offered in explanation of this action of the anesthetic on the kidneys, his impression being that each contributes its share to the syndrome observed Even spinal anesthesia is not free from this injurious action on the kidneys; this has proved a great disappointment to those who had hailed the spinal technic as exempt from injury to the kidneys. His general conclusions from all the material reviewed are that chloroform or ether can be used with the ordinary technic if the kidneys are known to be sound, but if the kidneys are pathologic, chloroform is absolutely contraindicated. For these cases the experiences to date show that the least harmful of all technics is general anesthesia with ether plus oxygen, preceded by an injection of morphin. Under all conditions, he continues, the amount of the anesthetic used should be the smallest possible; this is favored by shortening the duration of the anesthesia to the minimum by rapid operating, by doing all the preliminaries before commencing to administer the anesthetic, and by stopping the anesthetist at the earliest possible moment. Another point is the choice of the drop method; much less of the anesthetic is used when administered drop by drop, and the state of tolerance is more rapidly reached A preceding injection of morphin also reduces the amount of chloroform needed, while it has a tendency to counteract its injurious effects. In operating, everything should be avoided which would favor the degenerative action of the anesthetic Chief among these is loss of blood, which should be combatted in every possible way. Terrier called attention long ago to the fact that loss of blood during the operation favored postoperative albuminuria, while Strassmann found that withdrawal of blood in his experiments on animals contributed to the intensity of the chloroform intoxication. Careful hemostasis and prevention of chilling during the operation will, therefore, aid in preventing injury from the anesthetic. It is also important to refrain from administering a general anesthetic several times to the same patient within a short interval If the chloroform intoxication is superposed on a preceding similar intoxication, before the kidneys have had time to recuperate completely, there is liable to be serious trouble. The danger in the second anesthesia is far more imminent than in the first. The interval should be at least a week, and the second anesthesia should never be attempted until the urine is free from albumin and has lost its transient reducing power. It is a great advantage when oxygen can be administered with the chloroform or ether. Mixed with oxygen, the drug is much less injurious for the organs than the anesthetic alone. No benefit is derived from mixing chloroform and ether—the combination, he declares, seems even more injurious than either alone.

46. Affections of the Kidneys During Pregnancy.—Pollak summarizes the principal points in 611 articles on this subject, classifying them under various headings. In case of hematuria, various authors advise expectant treatment, the patients being kept in bed and the diet regulated to protect the kidneys against further injury. During the attacks, styptics should be tried, and Yfl has reported good results from salol, 1 gm (15 grains) three times a day. Treub induced premature delivery in one case, and Chiaventone punctured the amniotic sac to relieve the ureters and vessels from compression In tuberculosis of the kidney as one manifestation of general tuberculosis, the pregnancy is almost certain to have an aggravating effect, and no treatment is of any avail, but primary renal tuberculosis with pregnancy should be treated by removal of the tuberculous kidney if only one is affected. Israel operated in a case of this kind at the fifth month and the pregnancy proceeded to term The patient was in good health seven years later. He is convinced that there is no affection of the kidneys which displays such a progressive character under the influence of pregnancy as tuberculosis. It is difficult to determine whether or not both kidneys are affected; sometimes, besides cystoscopy, cryoscopy and catheterization of the sound ureter, it may be necessary to expose both kidneys If the integrity of the second kidney is dubious, the pregnancy should be interrupted This will not cure the tuberculosis, but it will mitigate the symptoms and retard the progress of the disease. In all this experience there is no record of neoplasms in the kidneys complicating pregnancy. These growths are observed before puberty or not until after 40. The evidence to date seems to show that the remaining kidney after a nephrectomy becomes hypertrophied and compensates for its absent mate, so that a nephrectomized woman may pass through a normal pregnancy. Reeb has reported eleven such cases of normal pregnancies after nephrectomy for calculi or pyonephrosis; one of the women had three Of the four women whose kidney was removed on account of tuberculosis, three have borne children since and are in good health. The fourth died in childbed; the remaining kidney had not been sound in this case.

Deutsche medizinische Wochenschrift, Berlin

January 28, XXXV, No 4, pp 137-184

47 *Origin of Diabetes (Entstehung des Diabetes) F. Hirschfeld
48 Shape of Leucocytes in Urine in Tuberculosis of Urinary Passages (Form der Leukocyten im Harn bei Tuberkulose der Harnwege) B Goldberg
49 Acute Postoperative Dilatation of Stomach Technic of Posterior Gastroenterostomy (Zur Frage der sogenannten akuten postoperativen Magendilatation) G Axhausen.
50 Movable Cecum and Chronic Appendicitis Wiemann
51 Points of Support in the Foot (Die Stutzpunkte des Fusses beim Gehen und Stehen) Momburg
52 Diagnosis of Suppuration in Nasal Accessory Cavities and Advantages of Suction Treatment (Nasennebenhohleneiterungen) Martens
53 Testing of Disinfectants (Disinfektionsmittelprufung) H Schneider
54 Protecting Glasses of Optical Glass (Schutzbrillen aus optischen Glase) Axmann

47. Origin of Diabetes.—Hirschfeld has recently reported some cases of diabetes in which the latter developed after some infectious disease The diabetes was accompanied by gastrointestinal symptoms, but there was no pronounced polyuria, although the glycosuria lasted for several months. Another special feature of the cases was the accompanying enlargement of the liver, which gradually subsided completely. In a still more recent case the onset of the diabetes occurred six weeks after a severe infectious sore throat; there was also enlargement of the liver in this case. In another case, a man of 46 presented symptoms of diabetes such as accompany a transient affection of the pancreas. He had had previously numerous attacks of influenza. After a concussion from jumping from a moving trolley car, the diabetes re turned in more severe form and became chronic. These and other experiences have convinced Hirschfeld that infection is an important factor in the origin and aggravation of pancreatitis and diabetes, and that chronic pancreatitis, such as is found so frequently in diabetics, generally has developed on the basis of repeated acute or subacute inflammations. Glycosuria lasting only a few weeks or months corresponds to the acute transient pancreatitis. The same mode of origin, he thinks, should be accepted for both cirrhosis of the liver and the cirrhosis of the pancreas, which is the basis on which diabetes develops, namely, inflammation or atrophy from the injurious influence of some primary inflammatory focus, conveyed by the blood. The inflammation in the pancreas is seldom so acute that the connection between it and the resulting diabetes can be detected. As a rule, the liver and the pancreas become simultaneously affected, but the liver affection generally retrogresses, although traces of the process can be discovered by the pathologists. If the liver is in any way deteriorated, as from the action of alcoholics or malaria, the process in the liver predominates, and, although cirrhosis may develop in the pancreas, yet no diabetes results. He thinks that the portal vein is very rarely the route by which the influences arrive responsible for the process in the liver and pancreas. He cites some cases recently described by Tsuchiya in which cirrhosis in the liver was the direct result of invasion of the liver through the portal vein by helminths, the *Schistosoma japonica*. The pancreas was intact. Hirschfeld accepts this as confirming his view that when the infectious agent arrives by the portal route the liver alone is affected, but when it comes by way of the blood both liver and pancreas suffer. It seems to be amply established by recent research that the pancreas is found nearly always more or less pathologic in every case of cirrhosis of the liver that comes to autopsy.

Medizinische Klinik, Berlin

January 24, V, No. 4, pp. 117-156

55 Modern Treatment of Pleurisy with Effusion. (Pleuritis exsudativa.) F. Lommel.
56 *Pathology of Median and Ulnar Paralysis. (Medianus- und Ulnarislähmung.) M. Bernhardt and M. Zondek.
57 Pneumococcus Pneumonia. B. Buxbaum.
58 *Massage in Correction of Deformed Nose. (Kosmetische Umformung einer knorpligen Nasendifformität durch Massage.) Orlowski.
59 Value of Addition of Suprarenal Preparations to Local Anesthesia. (Wert der Kombination der Lokalanästhetika mit Nebennierenpräparaten.) O. Stoll.

56. **Median and Ulnar Paralysis.**—Bernhardt and Zondek report a case of median and ulnar paralysis after fracture of the lower epiphysis of the radius and ulna. The coaptation was not perfect and considerable dislocation remained, but early functional and electric treatment restored complete function. The galvanic current was passed transversely through the forearm several times a week, while the muscles in the hands were treated with both galvanic and faradic currents until now there is scarcely any difference between the two arms, except for a slight atrophy of the musculature. In another case the ulnar paralysis developed thirty years after a fracture of the right elbow. He has noticed that these tardy injuries develop mostly in persons with cervical ribs. In another case the ulnar paralysis was a bicycle injury, the second case of the kind in his experience.

58. **Massage of the Nose to Correct Deformity.**—Orlowski reports successful application of massage to correct a cartilaginous deformity of the nose. The massage must be gentle, petrolatum being used copiously; results should not be expected before two or three months. The best results were obtained with what he calls protuberant tip—behind the tip the nose looking as if inflated, the nostrils rigid.

Münchener medizinische Wochenschrift

January 26, LVI, No. 4, pp. 161-216

60 *Retroflexion of the Uterus in General Practice. (Die Retroflexio uteri in der allgemeinen Praxis.) M. Henkel.
61 *Treatment of Placenta Prævia. A. Fiessler.
62 Differential Diagnosis of the Leukemias. W. H. Schultze.
63 *Treatment of Flat, Superficial Carcinoma. (Behandlung der flachen Hautkarzinome.) E. Rehn.
64 Changes in Size of Heart in Hot and Cold Bath. (Veränderung der Herzgrösse im heissen und kalten Bade.) R. Beck and N. Dohan.
65 Further Experiences with Marmorek's Antituberculosis Serum. Schenker.
66 *Roentgen-ray Cure of Hyperidrosis and Oily Seborrhea. Kromayer.
67 Pyocyanase in Diphtheria. J. Grosz and H. Ban.
68 Treatment of Syphilis with Gray Oil. (Zur Syphilisbehandlung mit grauem Oel.) Geyer.
69 Endemic Occurrence of Pneumococcus Angina. A. Schomerus.
70 Treatment and Prevention of Nontraumatic Neuroses in the Insured. (Nicht-traumatische Rentenneurosen.) E Beyer.
71. Lens Holder for Examination of Eye. (Einfacher Linsenhalter.) F. Kehr.
72 *Instruction in Obstetrics. (Der klinisch-geburtshilfliche Unterricht.) G. Vogel.

60. **Treatment of Uterine Retroflexion in General Practice.**—Henkel reviews this subject from various standpoints, emphasizing the progress realized of late years and the necessity for individualizing treatment to the special indications; no one procedure is applicable to all cases.

61. **Treatment of Placenta Prævia.**—Fiessler reports the experiences at Sellheim's clinic at Tübingen with 111 cases of placenta prævia in the last ten years. He insists that the *only proper way to open the uterus rapidly is to do it* under complete control of the eye. The vaginal technic for Cesarean section is being gradually abandoned, he thinks; only six cases were reported during 1907. The extraperitoneal Cesarean section, which Sellheim has introduced, is particularly advantageous for women with placenta prævia. It has been applied in nine such cases in the clinic, and all the women left the clinic in good health in three weeks, and with living children, except in one case, in which the child was dead before the operation, and in one in which the prematurely born child succumbed to infection of the umbilicus. This technic allows the uterus to be rapidly opened, in the absence of labor, with absolute avoidance of the slightest unintentional laceration, and with the possibility of complete control of the hemorrhage at any stage, especially during the dreaded third stage of labor with placenta prævia.

63. **Treatment of Cancer of the Face.**—Rehn is assistant to Lexer at the Königsberg surgical clinic, where he has been able to observe cases of apparent spontaneous retrogression of facial cancer with long intervals of apparent cure. But there are still always nests of cancer cells latent in the depths, and no one should be misled into regarding them as actually cured until the scar has been completely excised. The experiences related indicate that Roentgen-ray treatment, even of basal-celled carcinoma, is uncertain and unreliable, even in the absence of involvement of the glands. It is particularly dangerous from the fact that Roentgen rays build up a wall around the tumor so that it can not spread on the surface, but there is nothing to prevent its burrowing into the depths, a condition which occurs almost constantly. He always insists on incising the scar left from the apparent healing of a superficial cancer of the face spontaneously or under Roentgen treatment, and inevitably finds that, while healed on the surface, it is still lingering in the depths. The knife is still, as in the past, he asserts, the only safe means of treating cancer.

66. **Roentgen-Ray Treatment of Hyperidrosis and Oily Seborrhea.**—Kromayer has been successful in treating hyperidrosis with powerful *x*-ray treatment. He has now an experience of twenty cases which confirm his previous announcements as to its efficacy and the necessity for doses sufficient to induce a vigorous Roentgen dermatitis. He declares that the physical properties of the Roentgen current should be the gauge for dosage, not any subjective method.

72. **Instruction in Obstetrics.**—Vogel protests most decidedly against Krönig's views mentioned recently in these columns, Jan. 16, 1909, page 258. He regards them as a backward step and fraught with grave dangers should they be accepted, as he explains in detail.

Wiener klinische Wochenschrift

January 28, XXII, No. 4, pp. 116-150

73 *Routes of Infection in Tuberculosis. (Infektionswege der Tuberkulose.) J. Bartel.
74 *Immunization Against Tuberculosis. Id.
75 *Pregnancy at Term Complicated with Cancer in Uterus, Ovaries and Appendix as Metastases of a Gastric Cancer. J. Goblet.
76 *Late Syphilitic Lesions in Breast. (Lues-Spätformen der männlichen und weiblichen Brustdrüse.) K. Deutsch.

73. Abstracted in The Journal, Oct. 10, 1908, page 1252

74. Abstracted in The Journal, Oct. 24, 1908, page 1417.

75. **Pregnancy Complicated with Cancer.**—Gobiet's patient was a woman of 37 at term, but delivery was interfered with by carcinoma of the cervix and of the right ovary. Seven days after the missed labor, symptoms of septic poisoning developed: the woman was brought to the hospital, and the uterus removed, unopened, and the right ureter implanted in the bladder. Palpation nine days later, when the dressings were being changed, revealed an extensive carcinoma in the stomach, evidently the primary tumor. No attempt was made to remove it, but great improvement followed Roentgen-ray treatment. He reviews 172 cases on record of metastatic cancerous affections of the ovaries. The primary tumor was in the stomach in 126 cases, in the bowels in 16, in the breast in 12, in the uterus in 8, in the gall bladder in 7, and once each in the liver, pancreas and suprarenals His own case is remarkable for the metastasis in the cervix. The few cases on record in which this occurred have always been in pregnant women It seems wise to examine the ovaries in all cases of gastric cancer, removing them on the slightest suspicion. Only one case is on record in which the pregnancy continued to term with metastatic ovarian cancer. His case is an example of the great benefit that may be derived from removal of all visible metastases with palliative treatment of the primary tumor, thus allowing a long survival in comparative comfort.

76. **Syphilitic Affections in the Breast.**—In the three cases related by Deutsch, specific treatment was supplemented by operative measures in one case with excellent results. The patient was a woman of 36. Under specific treatment the *gumma subsided to* some extent, but the marginal portions required excision Another patient was a woman of 48 with diffuse syphilitic mastitis with local neuralgic pains The lesions subsided completely under mercurial treatment. The third patient was a man with syphilitic mastitis which promptly subsided under specific treatment. Deutsch comments on the importance of serodiagnosis, which now allows prompt differentiation in such cases.

Zentralblatt für Chirurgie, Leipsic

January 23 XXXVI, No 4, pp 106 136

77 *Modification of Gastrojejunostomy K Dahlgren.
78 Double Clamp for Operations on Stomach and Intestine. (Doppelquetschzange fur Magen und Darmoperationen) F. Karewski
79 Technic of Suprahyoid Pharyngotomy. A Schlesinger.

77. **Improved Gastrojejunostomy.**—Dahlgren cuts out an oval piece in the wall of the stomach, instead of making the usual linear *incision*, in doing gastrojejunostomy This insures *the evacuation* of the stomach much more readily while it protects against the growing together of the opening Rapid evacuation of the stomach *seems to have* a favorable effect on the general health in such *cases*. He gives an illustration of the clamp he uses in making the oval opening.

Zentralblatt für Gynakologie, Leipsic

January 23, XXXIII, No 4, pp 121-160

80 *Extraperitoneal Cesarean Section (Ueber den extraperitonealen Kaiserschnitt) A Doderlein
81 *Results of Operative and Diagnostic Direct Illumination of Abdomen, Rectum and Bladder. (Anwendung der direkten Beleuchtung der Bauchhohle, des Dickdarmes und der Harnblase bei den Operationen und zu diagnostichen Zwecken) D v Ott
82 Technic and Criticism of Research on the Placenta (Placentarforschung) W Liepmann
83 *Toxicity of Blood Serum in Eclampsia (Giftigkeit des Blutserums bei Eklampsie) R Graf and K Landsteiner.

80 **Extraperitoneal Cesarean Section.**—Doderlein proposes to make the section extraperitoneal, but *to obtain* access to the lower segment of the uterus on one side *instead* of working down on the median line, as others propose. The bladder is filled with enough water *to outline it*, and he pushes its right side toward the middle *and then* works upward the vesicouterine fold, *pushing it up* with a tampon sufficiently high to expose enough of *the uterus to deliver* the child with ease. There is no danger of *hemorrhage* with this technic and the incision need not be very large. In one of the two cases reported in which he has applied this technic, the vesicouterine reflection of the peritoneum tore as the child was being extracted, thus opening into the peritoneum, but the tear was sutured at once and no harm done. In future he intends to mobilize this vesicouterine reflection a little more extensively. He calls the technic "lateral extraperitoneal Cesarean section"

81. **Direct Illumination of the Abdominal Cavity.**—The Journal, Aug. 23, 1902, page 458, published an illustrated description of Ott's method of illumination by introducing electric lamps inside the abdominal and other cavities. He here reports his experiences with 761 cases of vaginal operations and 361 abdominal since he has introduced this method of direct illumination. It renders the vaginal technic so simple and easy, he says, that he now prefers it to the abdominal route, and the mortality has dropped from 2 14 to 1.48 per cent, while the mortality in 572 abdominal operations was 0 09 per cent. He regards the direct illumination as a great advance in abdominal surgery and claims to have been the first to introduce the principle into gynecology.

83. **Toxicity of the Blood Serum in Eclampsia.**—Graf and Landsteiner relate the results of extensive experimental research which have demonstrated beyond question the enhanced toxicity of the blood serum in eclampsia in comparison to normal serum At the same time their research does not indicate any special eclamptic poison, but merely that the serum contains an abnormal excess of the toxic substances naturally in the serum The waste poisons seem to be accumulated in abnormal proportions The next step is to determine whether or not the serum acquires this extra toxicity in other pathologic processes besides eclampsia.

Gazzetta degli Ospedali e delle Cliniche, Milan

January 15, XXX, No 6, pp 57 64

84 Trypanosomiasis and the Injurious Effects of Treatment with Arsenious Acid and Atoxyl A Massaglia
85 Experimental Study of Autohemoagglutinins G Rubino

January 17, No 7, pp 65 80

86 Etiology, Diagnosis and Treatment of Uterine Hemorrhage P Romeo

January 19, No 8, pp 81 88

87 Three Cases of Otitic Abscesses in the Neck (Ascessi sotto-aponevrotici latero cervicali otitici) A Bianco

January 26, No 11, pp 113 120

88 The Treponema Pallidum in Syphilitic Placentas C Mario

Policlinico, Rome

January 24, XVI, Practical Section, No 4, pp 101 132

89 Moro's Percutaneous Tuberculin Reaction. (La reazione cutanea secondo Moro) G Germonig
90 *Abortion from Lactation (Aborto da allattamento?) L Andalo

January, Surgical Section, No 1, pp 1 48

91 Experimental Research and Cure of Traumatic Lesions in the Muscles and Regeneration of Muscle Tissue R Caminiti
92 *Rare Variety of Femoral Hernia (Ernia crurale pettinea di Cloquet) V Gaudiani
93 *Obstruction of Small Intestine by Ball of Vegetable Fibers (Contributo clinico alla patogenesi delle ostruzioni del digiuno di Fitobezoari nell' uomo) P Frascella

January, Medical Section, No 1, pp 1 48

94 *Endemic Focus of Febrile Variety of Infectious Splenic Anemia in Children U Gabbi
95 *Ca[illegible] Cured by Splenectomy A Zancan
96 Ac[illegible] (Sull' azione della strofantina) U.

90 **Abortion in Nursing Mothers.**—Andalo has witnessed several cases of abortion occurring in women still nursing an infant, and he explains it as the result of the preponderance of the lacteal secretion over the gestation process in the uterus The women had never aborted before, nor have they since, and there was no trauma to explain the abortion.

92 **Femoral Pectineal Hernia Behind Femoral Vessels**—Gaudiani compares a case personally observed with fourteen in the literature, including Cloquet's own description of this rare variety of femoral hernia The patients were females in twelve of the cases and all were of advanced years Symptoms of strangulation indicate the necessity for immediate operation, as the hernia is generally not differentiated until late. The cases terminated fatally in 8 of the 15 tabulated In his own case the patient succumbed to pneumonia a week after the operation.

93. **Ileus from Obstruction by Ball of Vegetable Fibers.**—Frascella's patient was a woman of 66, suddenly presenting symptoms of ileus. The vomiting was incessant, but not fecaloid; the meteorism was limited to the median central zone of the abdomen, while the pain was in the umbilical region. A laparotomy revealed a concrement as large as an egg in the small intestine, and the symptoms of ileus subsided after its removal. The concrement proved to be a hard mass of vegetable fibers welded together by mucus, a typical phytobezoar.

94. ***Endemic Foci* of Febrile Infectious Splenic Anemia.**—Gabbi wrote from Messina to describe several endemic foci of a febrile variety of *splenic anemia* in children under the age of 4. generally boys, several children in one family being frequently affected. The syndrome includes intense anemia, tumefaction of the spleen and gastrointestinal disturbances, but no glandular involvement, no lesions of the bones or affections of the organs of respiration or circulation. The children affected were not always the weakest in the family, and there was no trace of rachitis or syphilis in the parents, who were *mostly fisherfolk.* No signs of malaria or of leukemia could be discovered in the blood of the children, even in those who succumbed to the progress of the disease. None of the localities has a reputation for malaria. but all are on the seashore. None of the physicians practicing in the inland knows of any such affection in their practice. In two cases Gabbi discovered the Leishman-Donovan bodies in the fluid obtained by puncture of the spleen, and he is inclined to believe that the affection is a tropical disease imported from northern Africa, quite distinct from the afebrile type of splenic anemia.

95. **Splenectomy for Splenomegaly with Cirrhosis of the Liver.**—In Zancan's case a farmer's wife in the Venice province presented the syndrome known as Banti's disease. There were no signs of malaria, syphilis or leukemia, and no benefit was derived from internal measures. The spleen was then removed: it weighed 1,450 gm. an hour after its removal, measuring 16 by 28 cm. There was nothing in the history to explain the development of the affection, and animals inoculated with scraps of the spleen failed to develop any symptoms or morbid process. The patient is in the best of health, two years after the operation, and has gained over 22 pounds in weight.

Riforma Medica, Naples

January 18, XXV, No. 3, pp. 57-84

97 *Tumors at Base of Brain.* (I tumori della base dell' encefalo.) G. Rummo.
98 *Cholesterin in Cerebrospinal Fluid of Paralytics and Its Share in Serodiagnosis. (La colesterina nel liquido cefalo-rachidiano dei paralitici, e sua partecipazione alla reazione di Wassermann.) G. Pighini.

98. **Serodiagnosis in General Paralysis.**—Pighini has examined the cerebrospinal fluid in 10 cases of progressive paralysis, 7 of dementia præcox, 5 of epilepsy, and 6 others of various affections. He found cholesterin in 8 of the 10 cases of the first group, the others being long chronic cases. The serodiagnosis was positive in 90 per cent of the cases. Cholesterin was also present in the fluid in 5 out of 7 patients with dementia præcox and in 3 of the 5 epileptics. He is convinced that the cholesterin is the main factor in the complement-fixation test, and that cholesterin is never present in the cerebrospinal fluid or in the serum under normal conditions.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

CLINICAL DIAGNOSIS AND TREATMENT OF DISORDERS OF THE BLADDER, with Technique of Cystoscopy. By Follen Cabot, M.D., Professor of Genito-Urinary Diseases, Post-Graduate Medical School, New York. Cloth. Pp. 224, with illustrations. Price, $2.00. New York: E. B. Treat & Co, 1909.

BACTERIAL FOOD POISONING. By Prof. Dr. A. Dieudonné, Munich. Translated and Edited, with Additions, by Dr. Charles Frederick Bolduan, Bacteriologist, Research Laboratory, Department of Health, City of New York. Cloth. Pp. 128. Price, $1.00. New York: E. B. Treat & Co., 1909.

ATHLETIC GAMES IN THE EDUCATION OF WOMEN. By Gertrude Dudley, Director of Women's Department of Physical Education, University of Chicago, and Frances A. Kellor, Author of "Experimental Sociology." Cloth. Pp. 268. Price, $1.25. New York: Henry Holt & Co., 1909.

THE AMERICAN MEDICAL ASSOCIATION OF VIENNA, 1909. (Course-Book, giving full information in regard to Courses, Lectures, Fees, Pensions, Rooms, etc.) *Paper. Pp. 73. Price,* 25 cents. Address the Secretary, care of Café Klinik, Vienna, Austria.

[illegible] HNE MASTOÏDIENNE, Travail de [illegible] de l'Hôpital Saint-Pothin. Par [illegible] Médecin Stagiaire au Val-De-Grâce. Paper. Pp. 114. Lyon: A. Rey & Cie, 1907.

SURGICAL DISEASES OF CHILDREN. By Samuel W. Kelley, Professor of Diseases of Children, Cleveland College of Physicians and Surgeons. Cloth. Pp. 768, with illustrations. Price, $5.00. New York: E. B. Treat & Co., 1909.

NINETEENTH ANNUAL REPORT OF THE NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION. Part II.—Report of Food Commissioner. Agricultural College, Fargo, N. D. Public Document No. 31. 1908. *Paper. Pp.* 192.

THE BODY AT WORK. By Alex. Hill, M.A., M.D., F.R.C.S., Sometime Master of Downing College, Cambridge. Cloth. *Pp.* 448, with *illustrations.* Price, $4.50. New York: Longmans, Green & Co.

SELF-HELP FOR NERVOUS WOMEN. By John K. Mitchell, M.D., Fellow of the College *of Physicians* of Philadelphia. Cloth. Pp. 201. Price, $1.00. Philadelphia: J. B. Lippincott Co.

SLEEPING SICKNESS BUREAU. Bulletin No. 3. January, 1909. Paper. Pp. 128. London: Sleeping Sickness Bureau, Royal Society, Burlington House, W., 1909.

SANITARY SCIENCE AND ALLIED SUBJECTS. Selected Bibliography. Arthur W. *Smith,* M.A. *Paper. Price,* 50 cents. Boulder, Colo.: A. A. Greenman.

TWENTIETH REPORT OF THE STATE BOARD OF HEALTH OF NEW HAMPSHIRE. Vol. xx, 1907-1908. Cloth. Pp. 332.

NEW PATENTS

Recent patents of interest to physicians.

910982. Forming metal salts. W. H. Allen, Detroit, Mich.
910784. Desiccating milk. J. H. Campbell, New York and C. H. Campbell, Philadelphia.
910643. Apparatus for magnetic treatment of diseases. R. S. Clymer, Allentown, Pa.
910504. *Truss.* A. C. Cooke, *Rockyhill,* Conn.
910662. Making caustic alkalies. W. T. Gibbs, Buckingham, Quebec, Canada.
910821. Vibratory apparatus for therapeutic use. J. C. Johansen, Copenhagen, Denmark.
910930. Medical electrical device for medical and therapeutical purposes. F. A. Ligowsky, Cincinnati, Ohio.
910854. Stethoscope. C. J. Pilling, Philadelphia.
910859 Washing device for cleaning wounds. J. Reusch, Wiesbaden, Germany.
910728. Ambulance. I. H. Russell, Washington, D. C.
910729. Gas-syringe with branched-out discharge pipe. K. Schmidt, Neuruppin, Germany.
910884. Scalp sprayer. W. B. Van Eps, Rochester, N. Y.
911243. Orthopedic apparatus. K. Johannesen, Detroit, Mich.
911324. Combined shoulder and body brace. J. D. Orear, Mexico, Mo.
911523. Antiseptic syringe. C. Piers, Chicago.
911269. [illegible] cids from buttermilk. L. H. Reu- [illegible]
911331. I [illegible] W. H. Rose, Baltimore, Md.
911528. Therapeutical apparatus. A. H. Shoemaker, Seattle, Wash.
911185. Device for treating the human body with heated air. D. Turnauer, Vienna, Austria-Hungary.
911532. Artificial leg. O. A. Watson, Columbus, Miss.
911101. Audiphone-transmitter. C. E. Williams, Natick, Mass.
911803. Ferment and producing it. A. D. Barr, Jersey City, N. J.
912231. Apparatus for generating and administering gases for general anesthesia. C. R. Cummins, Philadelphia.
911952. Cooler and aspirator. J. D. Devoss, Indianapolis, Ind.
912106. Multiple fluid sprayer. E. J. Frazier, Buffalo, N. Y.
911875. Apparatus for measuring the humidity in or determining the evaporating power of the air. M. M. Hastings, Washington, D. C.
911724. Syringe. F. S. Honsinger, Syracuse, N. Y.
912130. Artificial leg. D. B. James, Jackson, Tenn.
911727. Vapor bath cabinet. L. C. Jaques, Spokane, Wash.
912016. *Massaging* device. W. I. Miller, Cleveland, Ohio.
912024. Medical implement. W. M. Parks and B. B. Cross, Gas City, Ind.
912263. Sputum cup. H. J. Potter, Cambridge, Mass.
911627. Surgical instrument. B. S. Stephenson, Brooklyn, N. Y.
912205. Apparatus for applying internal massage. F. L. Talcott, New York, N. Y.
912214. Invalid-bed. L. W. Ward, Buckhannon, W. Va.
912769. Maternity corset. H. S. Anderson, Chicago.
912532. Combined respirator and inhaler. H. Brat, Charlottenburg, Germany.
912280. Sanitary appliance. H. G. Brott, San Jose, Cal.
912452. Combined sterilizer and irrigator. M. H. Evans, Joplin, Mo.
912691. Spraying nozzle. F. and F. Koenigkramer, *Cincinnati,* O.
912966. Spraying apparatus. E. H. Lamiell and H. L. Hurst, Can*ton, Ohio.*
12920. Reissue, putting up bandages. J. E. Lee, Conshohocken, Pa.
912588. Osteopathic table. W. M. Marseilles, Clinton, Mo.
912869. Treating phenacetin and product. A. G. Meyer, San Francisco, Cal.
912708. Massage device. T. H. Midgley, *Kalamazoo,* Mich.
912622. Manufacture of hydrated sodium carbonate. W. E. Ridenour, Philadelphia.
912894. Spraying appliance. J. C. Ryan, Gasport, N. Y.
912742. Inhaler. P. W. Shute, White Pigeon, Mich.

The Choice of an Automobile

And How to Care For It

A DISCUSSION OF THE FEATURES DESIRABLE IN THE PHYSICIAN'S MOTOR CAR

Most of the following articles are by physicians, but some are by experts connected with automobile companies. THE JOURNAL expresses its thanks for these contributions on one of the most practical subjects that affects the physician

EVERY CAR REQUIRES INTELLIGENT CARE

Largely through the influence of the last Automobile Number of THE JOURNAL,[1] I purchased, last October, a slightly used, fourteen horse-power runabout (109), and have used it daily since, except in wet weather, when I use my horse and buggy. I run the car and care for it myself.

I have been pleasantly disappointed in having very few tire troubles. This I attribute mostly to keeping the tires pumped up tight and driving carefully.

By caring for the car myself I have made its up-keep expense much less than that of my horse and buggy, but I warn any physician that, if he has not a mechanical turn, he had best leave the car alone or employ a chauffeur. No matter what the manufacturers may say, all cars require intelligent care and attention. The auto is a great time saver in the city and makes country trips a pleasure.

M. P. HUGHES, M.D., Gadsden, Ala.

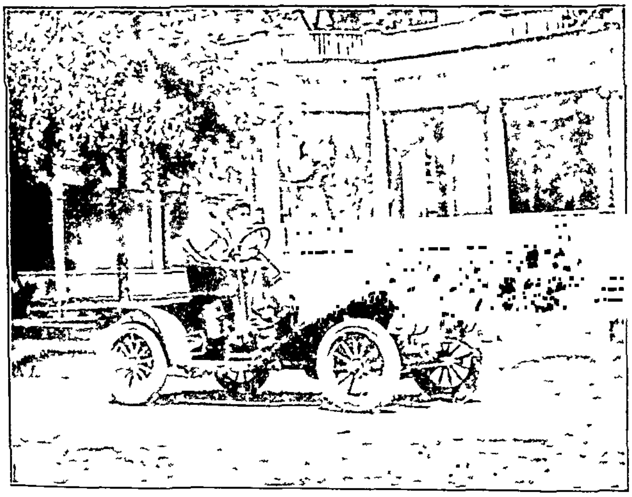


Fig 1.—Dr. B. S. Herring, Wilson, N. C., amid pleasant surroundings (Auto 161.* Article on page 825.)

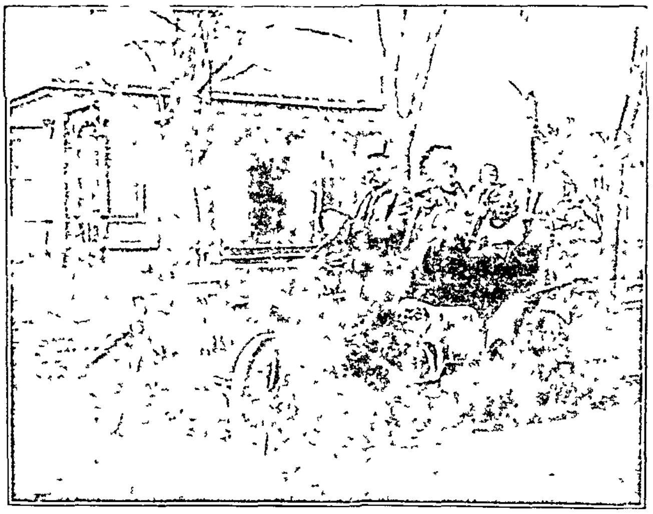


Fig 2.—The whole Smith family posed for this—so remarks Dr. E. O. Smith, Marquette, Kan. (Auto 137.*)

A RUN OF FEVER AND ITS COMPLICATIONS

About two years ago I contracted the automobile fever through contact with my neighbors who had purchased cars. This disease was prevalent in this state at that time and during the following year. By the end of last year in this vicinity it had assumed an epidemic form, as practically all my neighbors and townspeople were afflicted. In some cases it was a mild type and in others a very aggravated form

The manner in which it was contracted and the mode of onset was the same in most cases that came under my observation, viz., a dizzy whirl through the country with an automobile agent, whose tongue worked as smoothly and glibly as that of a detail man of a proprietary medicine house. This, together with the ever-changing panoramic scenes, the purr of the motor and odor of gasoline, produced complete relaxation, making the victim a splendid subject for the invasion of the automobile microbe.

Though my case was an aggravated one, I waited for THE JOURNAL'S second Automobile Number[1] and then decided to purchase a car. I have been driving it for eight months and would not think of going back to the horse drawn vehicle. True, one may get a little grease on one's hands and clothes occasionally, but the saving of time on the road, the ability to do more work, and more time for recreation more than compensate for these trifling annoyances. The time is fast aproaching when a doctor's patients will demand of him a rapid method of transit

I have not found it more expensive than keeping a team. The first cost, however, is considerable and the necessarily rapid deterioration of the machine, being subjected to so many strains in operating over all kinds of roads, is to be taken into consideration. I am persuaded that with the more general use of the automobile, the manufacturers can manufacture them at a greatly reduced figure.

This new demand in equipment for the physician should be met by a higher medical fee, that he may keep abreast of the times and lay by something, which he can not do with the present inadequate fee charged

I am not prepared to name the best type of motor car for the physician. Suffice it to say that during the past eight months I have been driving a gasoline motor (137*) and have not been delayed ten minutes on the road from any cause. The engine has always gone when cranked, the tires have never punctured or blown out, and the mileage traveled has amounted to several thousand. This car is equipped with a two cylinder eighteen horse-power motor, friction transmission and pneumatic tire (138). It is strong and durable, simple in construction and easy to operate.

E. O. SMITH, M.D., Marquette, Kans.

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[1] THE JOURNAL A. M. A., March 7, 1908.

* For key to automobile names, see editorial explanation

A SYMPOSIUM ON TRANSMISSION

SHAFT AND CHAIN DRIVE

Two devices may be used for the same purpose, but each under a different set of circumstances, and in their proper place they may perform their offices equally well, so a man without prejudice finds some difficulty in discussing their relative merits. To indicate the best one to use in given conditions is one thing, but to give a verdict of absolute superiority is another, and sometimes practically impossible. So I shall perforce confine my remarks to generalities.

From the earliest attempts to produce a self-propelling vehicle, capable of traveling over ordinary roads, invention has concerned itself with the means for utilizing the sources of power which were widely distributed, easy of access and cheap, it being obvious that no machine which depended on unusual fuels and peculiar forms of energy obtainable only in favorable localities could obtain universal vogue.

At first the steam engine presented the only solution of the problem. Under its boiler most any kind of fuel could be burned, but such a cumbersome piece of machinery left but little room for passengers and presented no opportunity to develop a pleasing contour.

The use of liquid fuel helped matters a little and the perfection of higher speed engines, which lessened the weight for a stated power, enlarged the possibilities still further; but it was the gasoline engine which, both figuratively and literally, gave an impetus to the automobile that has carried it to the perfection of the present day.

The question of power and its application being of paramount importance, it is but natural that the inventor should devote all his mental energy to the perfection of the engine and the means for altering the ratio of its movement to that of the final driver, which means has come to be called the "transmission."

When one has labored hard on what he considers the crux of a compound problem, he is apt to seize on the most obvious means for solving the less vital elements, and in the case of the automobile, when the engine and transmission were designed to fill the peculiar requirements of a universal vehicle, the inventor having choice of several well-known and commonly used methods of transmitting power between rotating shafts, became a prey to brain-fag and considered his problem solved.

A dreamer, who can live on food as unsubstantial as his dreams, may let his fancy take wings and fly, but a manufacturer must time his ambitions to the demands of his public or take to "banting" of necessity, and the dear, unambitious public wanted only a substitute for the horse, not a rival to the locomotive. The earlier machines, therefore, were built along the lines of accepted design in carriage building and a small engine of three or four horse-power, and a single cylinder, of course, was all that was required to meet all the demands of the time.

Considerations of economy of space and the best disposition of the load naturally pointed to a place about midway of the two axles and under the floor, and because vibration was a necessary evil in a single cylinder, it should be laid horizontally, with its piston movement parallel to the movement of the carriage. Thus having the driving shaft parallel with the rear axle, what more natural than to use the simplest possible means for connecting them, that is, a chain? There were, however, some of the earlier machines that used a belt for this purpose and one which went so far as to use several belts on pulleys of various sizes to take the place of a geared transmission. But mud and water are not good for belts; and a machine, however well designed in other particulars, would be useless with such a frail transmission, and so the chain became the standard "final drive."

A decided advantage possessed by the chain is that it does not add to the burden of the bearings. It is loose and free and does not add one iota of friction to the bearings and all the effort that it transmits becomes turning effort at the rear axle. The friction of the rollers, as they enter the interdental spaces in the sprocket, is the only loss and this is a negligible quantity. With properly designed stay rod or radius rod attachments, the rear axle may be anchored to the driving shaft so that while each is free to move through a limited arc, the distance between the two centers can not be altered; thus any variation of load or any movement due to a rough road will not vary the slack of the chain.

But such attachments present some mechanical difficulties and it is common to see cars wherein the radius rod attachments are of lesser length than the distance between the driving shaft and rear axle and any vertical movement would of necessity alter the slack of the chain. But however well the radius rods may be attached, either the body or the rear axle must move on an arc and not in a true vertical line. Hence a full elliptic spring is almost a necessity in cars driven this way.

When the chain is new and the sprocket is new, there is no lost motion except in the slack of the chain, and so far as transmitting power is concerned, it is an ideal drive. But the wear on chains is cumulative, that is to say, the wear on all the links must be added together and a slight wear will increase the slack considerably. On the other hand, the occasion for wear at each chain joint is not very good. Nevertheless it is difficult to make a chain so uniform in structure that the wear will be uniform throughout its length in every link. This means that the centers of revolution are constantly changing their relative distance from each other as different portions of the chain pass in and out of the sprocket. Too much slack has to be left on a worn chain in order to take care of the less worn places.

It is not an easy matter thoroughly to protect a chain from dust and dirt. Any device which provides a good covering. and at the same time permits the necessary adjustment for wear, becomes somewhat cumbersome and heavy and is rather an unsightly addition to the car.

While the chain does not need much oil, it is not the easiest thing in the world to put that little oil where it is most needed.

In the old bicycle days it was not such a matter to take off the chain, soak it a little while in hot vaselin, let it cool, wipe off the vaselin from the surface; then the chain was ready for a two or three months' run. The automobile chain, however, is heavy and unwieldy, and one hesitates before taking it off; yet with the new form of chains with well-hardened rollers, a single oiling will last a long time. But as an offset to these disadvantages, the chain is easily repaired. It is no difficult matter to carry two or three spare links in the tool-kit; a repair of a chain on the road, while not a kid-glove affair, may be made in a few minutes, and that is very important. To the man on a country road the easy repair of the vulnerable parts not only saves embarrassment but if he is a physician, may save a life.

As the desires of the public grew with their increased knowledge of what was possible, the cars increased in weight and capacity and the proportion of the weight of the engine to that of the whole car became less and less, so that its disposition in the frame became of less moment than in the earlier types. It is manifest that an engine placed in easy access under a hood in the front of the car offers not only greater accessibility but greater cleanliness; therefore, as the necessity for multiplying cylinders became apparent, the advantages of the upright form appealed very strongly to the automobile builder, and in this form of drive the shaft being at right angles to the rear axle, some form of bevelled gear became an absolute necessity.

Now it is admitted, at the start, that however well designed a bevelled gear may be, it is a physical impossibility to make one entirely without end-thrust or friction, and these two sources of loss, while not great, must be reckoned with and advantages must be found to more than offset them. The willingness of the automobile-buying public to pay a reasonable price for a perfectly designed and constructed piece of machinery has led to the construction of machines for finishing these gears, which produce a gear without lost motion and therefore without noise, with a minimum of friction and the smallest losses due to end-thrust.

Nevertheless this end-thrust exists. Suitable ball bearings are provided to reduce the friction of the end thrust but this does not entirely prevent loss of power, for it is not in the creation of friction that power is lost but in the indirect application.

But such a device may be perfectly housed, absolutely free from dirt, is comparatively small and compact, and requires no adjustment by the user after once being set, except at long intervals; and with any reasonable margin of safety there is almost no possibility of a disabling break. However worn, the gear will still drive the car.

The lost motion due to wear is not cumulative; that is to say, each tooth is an independent driver and is not affected by the wear on any other tooth, but it has to be driven through universal joints and these are sources of weakness, and unless paired, will give to the rear axle an unequal motion.

In traveling over a rough road the application of power to the final drive is alternately from the engine and from the rear axle; that is to say, the road tends constantly to accelerate and to retard the motion of the car and any looseness in the final driver results in irregularity of motion and the sudden application of strains to this member.

In the shaft drive there is almost no lost motion. As a consequence this source of loss and danger is almost entirely eliminated, whereas, in the chain drive, if the chain is much worn or irregularly worn, it is augmented. The chain is used, however, as a rule, on lighter cars, where the evil results of this imperfection would be greatly reduced.

The weight of the car, the disposition of the engine, the kind of roads over which it is to travel generally, make all the difference in the world.

A heavy car with the engine well forward, intended as a touring vehicle to be used on all kinds of roads and in all weathers, should, in the very nature of things, be driven with a shaft, but a light car with no great surplus of power, with the engine near its center, while it would drive with a shaft, would encounter greater losses and be subject to more inconveniences than though it were driven with a chain. For a light car with the heavy engine placed over the front wheels so that the shaft would be at a right angle to the rear axle, would meet the obstructions in the road to great disadvantage, absorb much power and make heavier front springs necessary; and if it were a two-cylinder opposed engine, as generally used on these lighter cars, it would shake as though with ague. And if the engine were set to the best advantage in other ways, a double system of bevel gears would be required for a shaft drive.

It would seem to me that the debatable point for the physician is the relative merits of a light or heavy car for his particular service, but that does not come within the scope of this question.

Frederick Purdy, Kenosha, Wis.

SHAFT DRIVE VS. CHAIN DRIVE AS VIEWED BY A PHYSICIAN OF MANY YEARS' EXPERIENCE

I have used several cars having chain drive (105) and several with shaft drive (106). The latter is to be preferred from many standpoints. In the first place, it is clean and requires little or no attention, which is an important factor in the use of a car by a professioal man. It is less noisy, is much more endurable, and as a consequence is less expensive to maintain. There is no kind of weather during which the gearing is not protected.

With the proper construction of the rear axle, there is so little wear on a good shaft drive that, after years of use, the gearing shows little or no wear and is not noisy, if properly oiled.

In muddy weather the mud and water, coming in contact with the chain, prevent its proper oiling and cause it to wear out rapidly; besides, it is a common occurrence to have a stone thrown by the wheels into the chain at its junction with the sprocket, completely locking the wheel and often breaking the chain. Dust is equally bad.

The sprocket wheels wear out, and are expensive to purchase and more so to install. A perfect cover for chain and sprockets that will not jar loose and become noisy and dangerous to the car, so far as I am aware, has not yet been discovered.

The only argument that I ever heard against a good shaft drive is that it requires more power to propel the car. While this may be true, the additional power required is so inconsiderable that this disadvantage is greatly overbalanced by the advantages. As further proof of the superiority of shaft drive over gear drive, nearly all the best factories are adopting that method of propelling their cars.

C. P. Thomas, M.D., Spokane, Wash.

A COMPARISON OF CHAIN AND SHAFT DRIVE

There is so much unintelligent discussion of the relative merits of chain and shaft drive, particularly in the case of salesmen praising their respective goods, that the following may not be amiss, as it can be taken, I believe, as a reasonable statement of the points to be considered:

The form of drive in every automobile, like practically every other part of the car, is necessarily a compromise. Every construction has some bad features, but is considered by the designer to possess, in relation to the other parts, enough good to more than outweigh the bad.

The transmission of power through chains is more efficient, through having less friction loss, than transmission through bevel gears. It is impossible to state how much more efficient, as that depends entirely on circumstances. On the other hand, chains have three disadvantages—noise, stretching and dirt. By the use of ample sprocket surface, accurately cut, noise may be reduced to a minimum. By the use of ample chain capacity and by providing expeditious means for taking up stretch, the stretching feature may be so reduced as to be of no importance. Side chains are entirely free from the objection of dirt, as they extend from one open sprocket to another open sprocket so that dirt does not do any particular damage, and in the second place, they are well away from the range of the dirt which is thrown by the wheels.

With the old-fashioned single chain under the body, the question of dirt is more serious because the chain is in direct range of the dirt and mud thrown by the wheels as they strike the ground, in addition to which the rear end of the chain runs into the housing which contains the differential mechanism, whereas the front sprocket is intimately connected with transmission and motor, so that the chain acts as a conveyer to collect the flying mud and distribute it over the three most important pieces of mechanism in the car.

The bevel drive is free from the three objections named for chains. It has, however, inherent objections of its own. It is somewhat less efficient, very much more expensive to build, involves of necessity a live rear axle and if anything goes wrong about it, the repairing of such troubles must be made in a well-equipped shop at a very considerable expense to the owner; whereas, with the chain drive, if trouble happens, repairs can generally be made by the roadside by an amateur.

The single chain drive also involves a live rear axle, being superior to the shaft drive only in efficiency and inferior to it in every other respect.

The double side chain drive eliminates the necessity of a live rear axle, the differential being placed on the jack shaft, which is only a driving member, whereas the live rear axle is not only a driving member containing the necessary machinery for driving, but is in addition thereto a load-carrying member, having only the tires between it and the ground, whereas the jack shaft has both springs and tires to save it from road shocks and, in addition, does not have any load to support.

The double side chain drive also has its objection, which is the necessity of a bevel gear in addition to the chain. This objection is, however, minimized because this construction allows the two bevel gears to be nearly of the same size, which makes them more efficient than when there is a considerable difference, as is necessary for a large gear reduction between engine and wheels. With this combination a little of the reduction is taken by the bevels, but a further reduction *ad libitum* can be made through the sprockets. Thus, in the case of a high-speed motor driving a low-speed car, a shaft drive becomes a practical impossibility, the choice being between single chain or double side chains, the latter of course being highly preferable.

From the above it can readily be seen that so many different elements must be considered that when the callow salesman makes the offhand general statement that chains are better than shaft or that shaft is better than chains, he knows considerably less about it than any one who has carefully read the above remarks.

Fig. 3.—Dr. H. H. Judd, Wallace, Idaho. A holiday in August through the cottonwood underbrush. Not as smooth as it looks. (Auto 122.)

Frank Briscoe, Detroit.

TRANSMISSION GEAR

Of the three types of transmission gears used in automobiles—the friction, planetary and sliding—an experienced motorist will usually favor the sliding type.

A number of manufacturers have experimented with the friction type, but sooner or later most of them abandon it. The friction gear gives almost any rate of speed desired by moving the friction wheel to different positions on the revolving plate keyed to the engine shaft. With much use the friction wheel is liable to slip on the plate, the bearing surface being so small; this is one of the principal objections to this type of transmission.

The planetary type gives two speeds forward and one backward. Revolving discs filled with gear wheels, the central one fastened to the engine shaft, are surrounded by clutch bands, made of spring steel and lined with wood fiber or leather. These revolving discs are usually encased and the case filled with lubricating oil. Most cases allow the oil to leak out, then the gear wheels run dry, wear and get noisy. In addition to this, the band linings wear out when the clutch bands slip. This causes loss of power and speed and leads to endless annoyances, loss of time and causes lots of expense. This type of gear is used in many makes of cars and is greatly superior to the friction type. Most light cars use this type of transmission:

The sliding transmission gives three speeds forward and one backward. This extra speed forward (intermediate) is of much value. In this type of car there is a friction clutch locking with the fly-wheel, of large friction surface, a powerful bite, which when properly adjusted seldom gives trouble. There is great durability to this style of clutch.

The intermediate gear shines in many places where the high can not be utilized On hilly and muddy roads it is of great value in making speed. The friction and planetary types of transmission are easier for the novice to manipulate, but when he becomes an expert, the sliding type will give him more satisfaction and be just as easy to handle.

The sliding transmission, for the smoothness and quietness of its running qualities, its strength and durability, as well as its ease of manipulation when once learned, to my notion, surpasses all other types and at the present time leads.

C. E. Rogers, M.D., Montevideo, Minn. (160).

FRICTION DRIVE—ITS PROVED EFFICIENCY

The automobile public has all but ceased arguing the question of friction transmission efficiency. In the minds of thousands of car-owners, drivers and experts, it is a demonstrated and accepted fact.

There are, however, certain enthusiasts who do not grant to friction transmission the credit due it. If this brief statement may lead some of these unbelievers to a more earnest study of the whole transmission question, and friction transmission in particular, it will have served a good purpose.

Many authorities agree that the use of the aluminum disc as the driving member, and board-fiber or friction-paper wheel as the driven member, is the highest development of the friction transmission as used in the construction of automobiles, and gives to the car certain distinct advantages which no type of gear transmission, no matter how expensive in construction, can give.

From the standpoint of economy there is hardly a comparison between friction and gear transmission. The simple friction transmission costs much less to build and its low cost enables a manufacturer to sell a car with more quality in other parts than a manufacturer of gear-driven machines can possibly afford to sell at a similar price. The simplicity, too, of the friction drive eliminates practically all the expense of up-keep. The only part to wear out on a transmission is the board-fiber rim of the driven wheel, and it can be replaced by any one in an hour's time, at an expense of not more than $3. For a car in ordinary service, this board-fiber rim seldom needs to be replaced more than once a year.

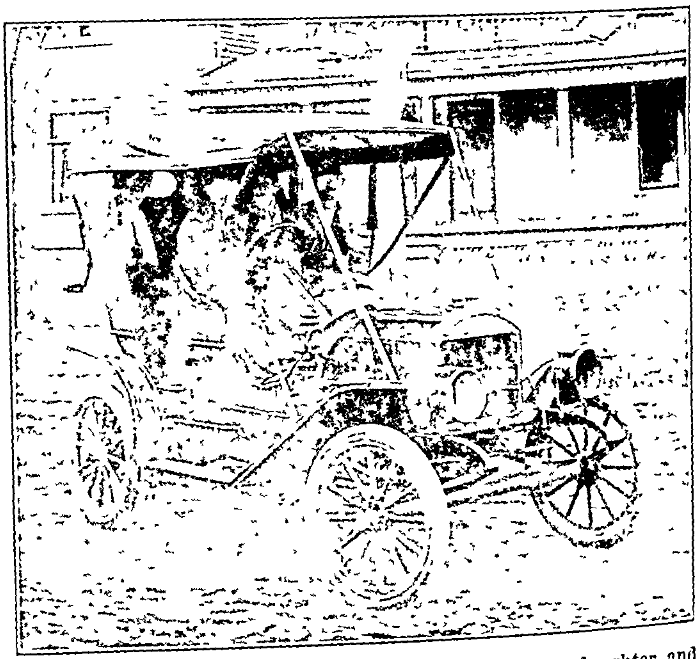

Fig 4.—Dr. J. A. Palmer, Erie, Kan., with his wife, daughter and repair man. (Auto 162. Article on page 816)

Aluminum solved the problem of the driving wheel. The aluminum friction disc, against which the driven wheel revolves, will not wear smooth. Thus perfect friction is assured under all conditions. Every user of gear transmission knows how these figures on the up-keep of friction transmission compare with the cost of gear up-keep.

The service—the constant, dependable efficiency—is more important. Repeated and indisputable road tests definitely prove that the friction transmission actually transmits under all conditions, a higher percentage of the power generated than any type of gear transmission.

The friction drive, because of its simplicity, does away with a large share of the unexpected breakdowns which car-owners experience. It gives a flexibility of control attained with no other transmission. It permits the widest range of speed—from one mile per hour up to the highest speed. It eliminates shock and jar in starting and stopping. It serves most efficiently as clutch and brake. Its every operation is silent.

The following description of a friction transmission that is being placed on the market at the present time will, no doubt, prove of interest to the reader. This transmission system embraces but two elements—a friction disc and a friction wheel, the former mounted on the rear end of a continuation of the crank shaft and the latter on a cross, or jack shaft lying in rear of the disc face, from which the chain transmits to the rear axle.

By lever, the friction wheel can be slid along the jack shaft so that it comes in contact with the face of the friction disc at its center, or at any point from this through the periphery of the right side for forward speeds, and on the opposite side of the disc for reverse speeds. Once the friction wheel is positioned for the desired speeds, the friction disc has to be carried rearward in order to press firmly against the board fiber, tire or rim of the friction wheel. This is accomplished by sliding the entire continuation shaft with the disc rearward, which is made possible by keying a 3-arm spider on the forward end of the continuation shaft and inserting three studs in the rear face of the fly-wheel so that ball-and-socket joints in the spider arm may slip back and forward on these studs.

In describing the above transmission the *Scientific American* editorially says: "The simplicity of this device is as great as its antiquity. Its cost of maintenance is extremely low, while its reliability is very great." The *Scientific American* adds that the device has been applied to trucks of the heaviest type with equal success.

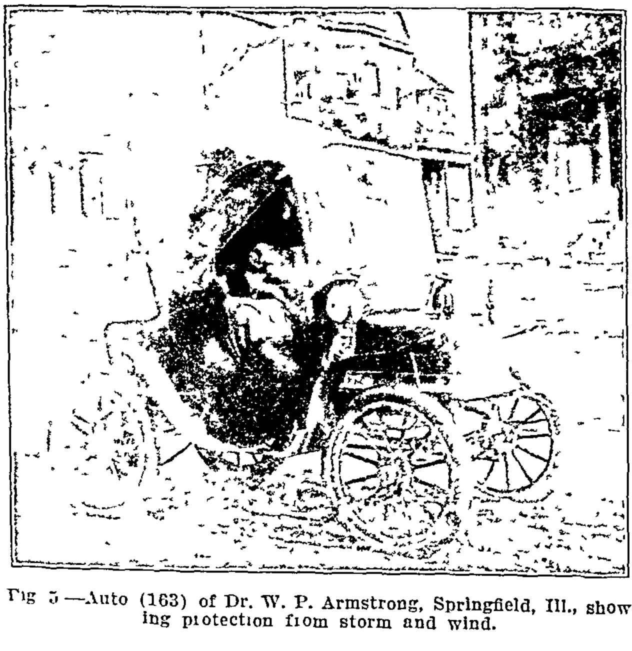

Fig 5—Auto (163) of Dr. W. P. Armstrong, Springfield, Ill., showing protection from storm and wind.

Even the most confirmed doubter will agree that this application of friction transmission is the supreme test for real efficiency. Can there be any question that its constant reliability, its utmost ease of control, its record economy of maintenance, its sure going, even in muddy, slippery streets, and its hill-climbing—all the while carrying loads of from two to three tons, is absolute proof of the efficiency of the friction drive?

The use of the friction drive on heavy trucks is not of direct personal interest to all owners of pleasure cars, except as it indicates the assured and even greater reliability of friction transmission in pleasure cars. In these lighter cars, subjected to the usual service, either in town or country or on long, hard drives either in level country or among hills, the reliability of the above type of friction drive is absolute.

G. B. Louderback, Anderson, Ind.

TWO TERSE TESTIMONIALS

I have always been (and am yet) a great admirer of a good horse. I have owned and driven such good ones as Dr. Russell, 2:20½; Doncella, 2:16, and a number of fine show horses, but last July I purchased an automobile (101) and for me it has the horse completely outclassed. As a matter of fact, you can no more compare a horse with an auto than you can compare the old horse car with a modern trolley car. A machine is a great time saver. I would sooner drive and care for a car than any horse I ever saw. I have driven my machine 5400 miles and found it thoroughly reliable. A doctor should buy some good car, with two or four cylinders, with low wheels and pneumatic tires. Such a car rides easier than a high-wheel one, allows traveling at a more desirable rate of speed, looks better, and is probably no more expensive. Take my word for it, sell your horse and buy a car, such a one as I speak of, and you will thank me for giving you this good advice.

L. B. Russell, M.D., Hoopeston, Ill.

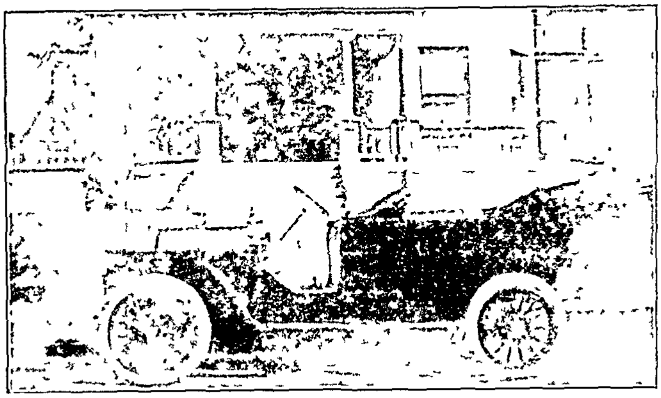

Fig 6—This is the comfortable-looking car (133) in which Dr. H H Roberts, of Lexington, Ky., toured through several states for a vacation. (Article on page 815)

During the last six months of 1908 I used continuously a four-cylinder machine (115) and found it satisfactory in every respect. I can make my visits in one-half the time that I could with a horse and buggy. I have little trouble. The machine is about as expensive as keeping one horse in the livery stable Our hilly pikes are very poor, making automobiling more difficult and expensive. In a level country with good roads, nothing can compare with a machine. In rough country with poor roads, high wheels would be preferable The mud roads that I have to contend with could not be negotiated with any type of machine during the winter and spring, and I use horse and buggy until the first of May.

Every physician must find out for himself by experience what sort of car is best suited to his needs and community. In a rolling country speed must be sacrificed for power and endurance; in the level, the opposite. If it can possibly be afforded, a reliable magneto should be purchased. The purchaser should insist on getting the heaviest tires his machine will carry. Most runabouts that have 3 inch tires would be better with 3½ inch tires. The difference in cost will be more than overbalanced by the longer endurance and lessened trouble A non-puncturable tire would be the greatest boon

The ordinary acetylene generators on small cars are worthless to physicians. A gas tank will save trouble and worry. One should get the best machine one can afford, with plenty of power; gas and lubricating oil are both cheap.

Look after your machine yourself unless you can afford to employ a competent chauffeur. Learn its anatomy and physiology. If you have no taste for mechanics, and can not afford to employ a mechanic, don't buy a machine.

J. C. Larkin, M.D., Hillsboro, Ohio.

THE AUTOMOBILE FOR PLEASURE

THE AUTO AS A MEANS OF RECREATION

The automobile has within the last five years become almost as necessary a part of the active physician's equipment as the telephone and that part of the subject will be very thoroughly covered in the Automobile Number.

I should like to say a word, however, on the use of the automobile as a means of recreation for the physician. I have become a great convert to the motor car tour as the best means of taking my vacation and I recommend it enthusiastically to my colleagues.

I have made three trips during the last three years, the first one of about 3,000 miles through New York and New England, the second of about 4,500 miles through central Europe, and the last of about 3,000 miles through the White Mountains, the New England seacoast, the Cape Cod country, Long Island Sound and Long Island.

There is no more fascinating way of spending a vacation of from two to six weeks than in an automobile tour. One sees the country to better advantage than when using any other means of locomotion, unless it be walking, and this, of course, is very slow and the amount of ground which can be covered very small as compared with the country which can be seen in that length of time with a machine.

I have devoted a good deal of study to the type of machine best adapted for a touring car. Here in America one wants a machine with good clearance (from 10 to 11 inches), of considerable power (about forty horse-power), a four-cylinder car (166), with cylinders 5x5½ or 5x6. Probably the more reliable car is a chain-driven car, although such a car is more noisy than a shaft drive and, if one has but a single car to use both for touring and town work, a shaft drive is preferable. The best type of body is that known as the sheltered phaeton type, which can be used for a touring car in the summer and can easily be converted into a limousine for winter use. I have had two of these bodies built (167) and have found them exceedingly satisfactory. Such a body can accommodate very well five people besides the driver and sufficient baggage can easily be carried for a three or four weeks' trip, two light automobile trunks being carried on a trunk rack behind, a goodly-sized dress-suit case under the front seat and the chauffeur's baggage in a circular telescope carried within the two extra tires, and the small hand luggage inside of the tonneau and on top inside the rail.

In touring the speed should not exceed twenty to twenty-two miles an hour. A car at this rate of speed is under perfect control and one can see the country to the best advantage. One can run from 100 to 200 miles and do it with comfort; the average, however, should not exceed 125 miles. Through central Europe my party found it most enjoyable to average about 125 miles, doing this in about six hours' driving, three in the morning and three in the afternoon after lunch. This usually brings us to our resting-place about 4 o'clock in the afternoon and gives us the opportunity of a good walk or exercise and sight-seeing.

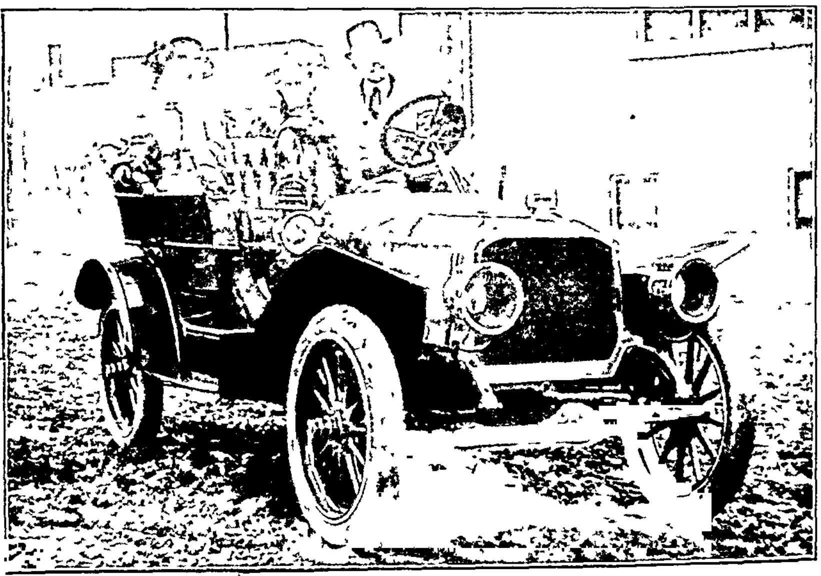

Fig. 8.—Dr. H. B. Engle, Newton, Iowa, and his car (115).

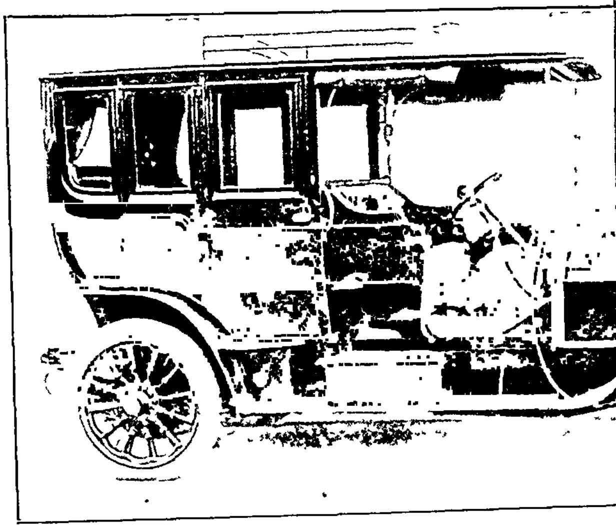

Fig. 7.—Limousine of Dr. Arthur Dean Bevan, Chicago. This is convertible into a summer touring car by the removal of the panel containing the window and the substitution of a low summer door instead of a high winter door.

The dependability of the modern car is so great that in the three tours which I have made, amounting to over 10,000 miles, we have never had a car in the shop and have never missed our regular connections, even our midday luncheons. The principal difficulty encountered is tire trouble, and with the larger wheels that are now used, this can be reduced to a minimum by careful driving.

As a most enjoyable trip I would recommend for the coming year shipping a car to Liverpool or Cherbourg and going through France, the Black Forest country, Austria, and to Budapest to the International Medical Congress, and back by way of the Austrian Tyrol, Switzerland, northern Italy, central France, especially the château country, and home. I know of three or four physicians who are contemplating visiting the International Congress this summer in this way. I think no more enjoyable six weeks' or two months' trip for one who has a good touring car could be planned. The trip from Cherbourg to Budapest could be made comfortably in about ten days. It would be well to take two weeks or more to the trip, staying a few days in Paris. While in Paris the owner of the car should join the French Automobile club and deposit with this club the amount of duties necessary for all the various countries through which the tour is to be made. The club in return will furnish papers which will be accepted by the custom-house officers at all frontiers. This will save much time and annoyance. When the car returns to Paris the money deposited is collected from the club, minus a nominal fee.

Arthur Dean Bevan, M.D, Chicago.

THE LIFE OF A MOTOR CAR

At the time I entered the automobile game there was practically no information as to what could be expected to be the average life of a motor car. This to me was an important question, as limited life might make the game too expensive to enter. Seven years ago, I fell in love with motoring. I wooed and won—with the aid of a check-book—what was then dignified by the imposing title of a "touring car,' and what would be now called a little light "runabout" (115). It was a one-cylinder, nine horse-power machine, and I told of my troubles, tribulations and final triumphs in the first Automobile Number of The Journal.

During all these seven years I have clung to this one car, which has been running on and on like Tennyson's brook, just as merrily as ever, and, because of my intimate acquaintance with its whims and caprices, it has been running with even less grief and trouble than in the days of old. It is to-day just as reliable, powerful and speedy as when new, and is certainly capable of many more years of satisfactory service.

I have always taken care of the machine myself, and believe that this is the best thing to do, as no one but the driver can know the real condition and needs of the car. Any part showing wear has been replaced and—excluding tire expense, which, like the poor, we always have with us—the principal items have been a new differential at $25, a new chain about every eighteen months, and new gears on the cam shaft. I know the cost of keeping a team and feel sorry for those who have to buy horse-feed at the present prices. It is much cheaper to patronize the oil trust. It is not a question any more of buying a car, but what car to buy. I have found the motor vehicle a great success, but do not want to leave the impression that driving an automobile is one continual round of unalloyed bliss. A machine should not be expected to run from season to season with only gasoline and no attention. It is not an unmixed blessing, but the advantage and pleasure are infinitely greater than the trouble. I would not, if offered it as a gift, care for and drive the best team in the state.

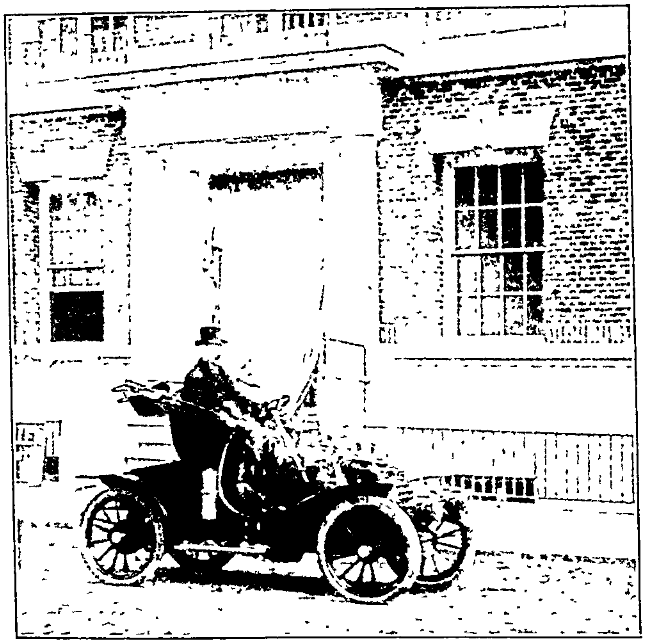

Fig. 9.—Dr. G. Milton Linthicum, Baltimore, and his car (174), in front of the new library building of the Medical and Chirurgical Faculty of Maryland.

After the excellent service my little machine has given me, I feel somewhat ashamed to confess that last month I purchased another car, becoming, perhaps unfortunately, infected with the mania for more speed, more room and more power, and am getting a thirty horse-power, four-cylinder machine with magneto, shaft drive, selective transmission and convertible into either a two or five passenger car (116). I have not deserted my first love, but shall keep both machines, as I feel that a reserve car will be a valuable asset, and if the new vehicle of my joys and sorrows gives as good service as the old I shall certainly be happy.

Harry P. Engle, M.D., Newton, Iowa.

BUY A GOOD CAR, NOT A CHEAP ONE

Four years ago my first venture was a two-cylinder car of twenty horse-power (131), which gave splendid service for about four months, then began to, balk and rattle and go wrong. During the next six months, I spent enough money trying to keep the thing going to more than take up my spare change. At the end of the year I sold the car to the other fellow.

I used next a high-wheeled car (132), for just sixty days. I was glad to sell it for half price, for I felt that it was not only impracticable, but absolutely dangerous in crossing street-car tracks, starting down inclines, etc.

Still I did not give up the idea that the automobile was a "good thing" for the physician. I bought a light-touring car, four cylinder, forty five horse-power (133, page 813). I have run this car over 6,000 miles at an expense for repairs of $7.50, this being caused by the breaking of one of the front springs.

Last summer I toured Kentucky, Ohio, Michigan, Canada New York and Pennsylvania, nearly 2,000 miles, without a single adjustment and with only one puncture, on a boulevard in Detroit, a three-inch spike causing the trouble.

For all around usefulness the light-touring car of high horse-power, with seating capacity for five, is the ideal car for the physician. It is not too large to use in practice, and gives service for pleasure and business. A great mistake is made in buying small cheap cars. They are frail, lack proper power for driving over all kinds of grades and roads and are constantly giving trouble. In the larger car all the parts are well constructed, the material is the best and the tires are larger.

I find that much trouble is caused, in some cars, from tires being too light. I believe that some makes of the high-wheeled car may give satisfaction in the country; but for the difference in price between this and a first-class car, the high-priced car is the cheaper in the long run. A car of this type can be bought for from $2,000 to $2,500. The old adage, "Nothing is good that is cheap," holds good of the automobile. Any car will give service when it is new, but what the physician desires is a car that will give service at all times and is of sufficient power to meet any emergency.

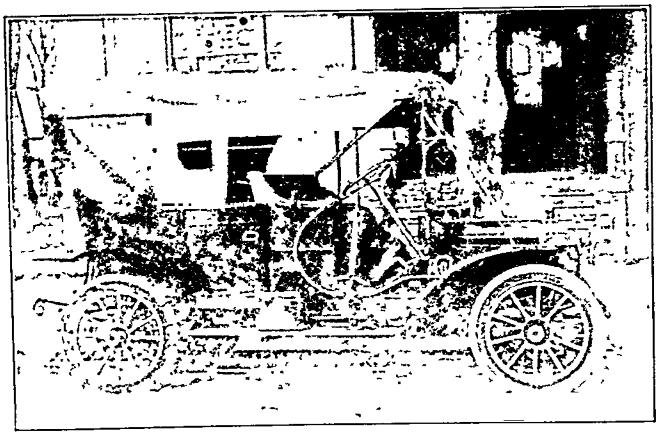

Fig. 10—Car (177) and chauffeur of Dr. W. B. Caven, Toronto.

It is important for the physician to run the car himself; to learn the construction thoroughly. I find this not only a pleasure, but a diversion. Three hours' work a week will keep the car in perfect order.

My records show that I have run my car every day, winter and summer, at an expense of $18 per month. The rapid means of getting about is a source of great satisfaction, as well as the time saved. If I had to pay double, the amount would be far better spent than in keeping two horses. Therefore, I believe that unless one is able to buy a good car it is better to defer the matter until one feels justified in making such a purchase.

H. H. Roberts, M.D., Lexington, Ky.

SEVENTY-FIVE MILES FROM A REPAIR SHOP

My automobile experience consists of one year with a two-cylinder twenty-two horse-power touring car and more recently with a four-cylinder eighteen horse-power runabout, both of the same make (122). Considering the amount of abuse that a car must receive in this rough country and the primitive condition of the roads, this touring car gave excellent results. As a time-saver an auto has no equal, not to speak of the comfort and pleasure one can have while making distant calls.

As I am about seventy-five miles from a repair-shop it became necessary for me to diagnose and treat all cases of breakdown, but I found this not so difficult after a period of careful observation and a few "experiences."

The tire question was the most annoying single trouble because of the ruts which were baked to almost stony hardness by the sun and wore the side of the tire very rapidly. I obtained the best service from a set of tires (123) covered with leather protectors at certain times, the life of a tire being thus prolonged considerably.

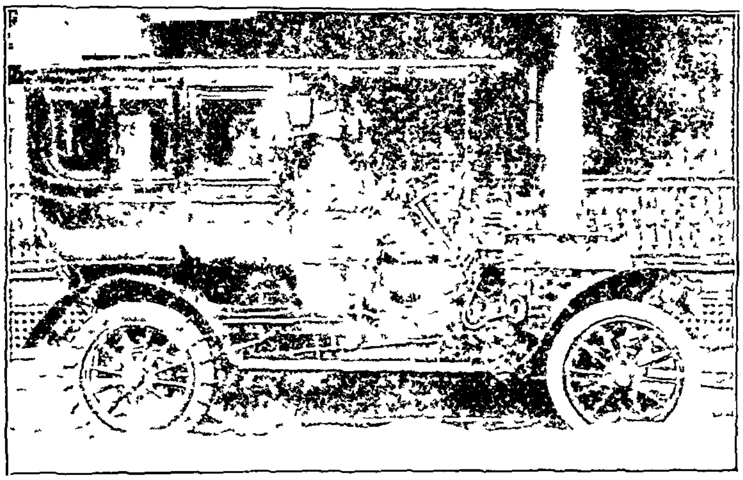

Fig. 11.—The car (175) of Dr. Herbert A. Bruce, Toronto.

My deductions are in favor of a four-cylinder runabout, which gives the maximum power and flexibility with the minimum weight.

High centers in the road are annoying, and therefore a car with maximum clearance is indicated. Most shaft-driven cars are preferable in this respect.

By the aid of good acetylene lamps, night driving becomes a pleasure, and these added to a good top and a weather-proof front allows one to drive in any kind of weather with great comfort. H. H. Judd, M.D., Wallace, Idaho.

IMPORTANCE OF LUBRICATION

After having used an automobile for over six years, and in my earlier machines putting up with trials, such as balky engines, broken crank shafts, defective ignition, poor tires, etc., I am at present more firm in my belief that an automobile is the best form of conveyance for a physician than when I placed the order for my first machine (143) after listening to all the advantages of the automobile as portrayed by an enthusiastic agent.

I used that car a year, during which time it was in the repair-shop rather often, but I had enough use of it to feel encouraged and more ambitious, so I bought a touring car (144), which proved satisfactory—standing up well under hard daily use and a trip completely around Long Island, which seems little enough now, but in 1905 was considered quite a feat. Then a four-cylinder shaft-driven car (150) was put on the market, and, as it seemed much superior to my one-cylinder chain-driven, I decided to try one. I used this car a year with practically no repairs, and then bought one of the model "R" cars, as it was much better-looking. This machine has given me most splendid service, is economical with gasoline and oil, and requires very little attention. In fact, I used it constantly for one stretch of three months without even having to clean a spark plug. Correct regulation of the oil-supply explains that achievement. Desiring a larger car, I have just purchased a touring car (146), but have used it very little.

In selecting a car a physician needs a four cylinder, shaft-driven, light touring car, or runabout, of a standard make, equipped with a magneto and an oiling system that oils all or nearly all the places to be oiled, thus doing away with oiling by hand every day. James E Tytler, M D, New York.

THE IMPORTANCE OF INSTRUCTION IN USE OF A CAR

The second automobile number of The Journal removed any doubts I had on the subject of the automobile and to-day I am the owner of a friction-drive gasoline car (162). Without previous experience or special mechanical ingenuity, I have handled this car about four months, and made my trips and returned with my own power. My manual of instruction came a couple of weeks after the car!

Some one ought to get out a manual that would be of some use to the beginner. For instance, in going down a steep hill the current should be switched off and the power kept on at slow speed; then the brake will scarcely be needed. Not knowing this in my first attempts, I made some records, the brakes not holding very well. Again, in going up a steep hill the car can be held anywhere by keeping on the power. I learned this by experience, fortunately without any accident.

The inexperienced driver without an instructor will do well to bear these points in mind. Half an hour of proper instruction would have put me in complete control of the car.

I have climbed all the hills of any size in the county, have gone through mud-holes and stretches of muddy roads that would test a good team. I don't want to travel any faster until the air ship becomes recognized as a safe method of transit.

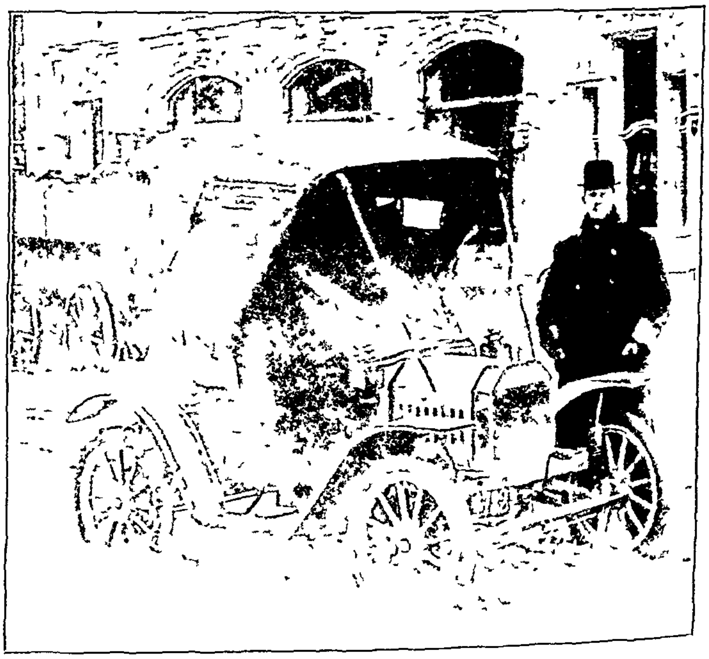

Fig 12—Car (108) of Dr F. E McClure, Detroit, taken in front of the building in which is his office.

Theexpense of maintenance is not great or out of proportion to the service derived. My 12-year old son keeps my car in order, takes off tires, repairs tubes, oils the various parts, and all with manifest pleasure. What a different spirit when the old horse requires grooming! The pleasure experienced in handling a good car removes the burden of country practice. A trip of ten or twelve miles is now an actual pleasure; there is no sense of fatigue and one is always ready for another run on return.

My final advice to the prospective purchaser is: Get a car large enough to carry some of your family or friends. Combine business with pleasure—turn the old horse out on pasture and add ten years to your existence.

J. Allen Palmer, M.D, Erie, Kans.

A GOOD INVESTMENT

Three years ago I sold my horse and bought a second-hand machine (107) of standard make and drove it 1½ years, but with an amount of trouble and expense entirely out of proportion to its value. During the summer of 1908 I drove another second-hand machine (108) with less trouble than the first because it was of a later and simpler construction. In September, 1908, I bought a new 1909 model of the same make (108), which, with an equipment of top, curtains, lamps, horn and odometer, cost me $603.50. Since that time I have driven it every day and almost every night, through rain, snow and mud, going anywhere I wanted to go at any time I wanted to go. I have made no effort to save it excepting that I have been very careful to see that lubrication was sufficient.

My odometer shows at this writing a trifle over 2,000 miles, with results as follows: Average mileage per gallon of gasoline in the winter, 23 miles; in the warmer weather of the fall, 25 miles; 360 miles per gallon of engine oil. The differential gear box is filled about every 1,000 miles, and the transmission box once a week. My gasoline costs me 10 cents per gallon, engine oil 30 cents per gallon, and transmission oil 6 cents per pound, and that is absolutely all the expense I have had. The machine has not stopped once, nor even hesitated. I have tightened but one bolt and that on the starting handle. It starts as easily on a cold morning as on a warm one. The total weight is about 900 pounds equipped, and to this light weight I attribute the fact that I have not had even one puncture.

The engine is a single cylinder 4-cycle, but with no explosive vibration, and the chassis being hung on four coil springs, one at each corner, makes it ride as easily, in fact, easier, than any small car I have been in and equal to many of the large ones. It is small, convenient, fast, reliable and handsome in appearance. In fact, after my previous experiences, I am enthusiastic. During the past four and one-half months I have driven it with perfect mental and physical satisfaction. I believe it approximates the ideal car for a city physician. I have not driven it over any bad hills, nor over a very long stretch of deep mud in the country, but I have done enough of this to satisfy me that it will go anywhere that any other car will go, regardless of size or power. It will not go as fast under such conditions as some might prefer, and this point, namely, lack of power to speed under difficult conditions, would be its only drawback, in my judgment.

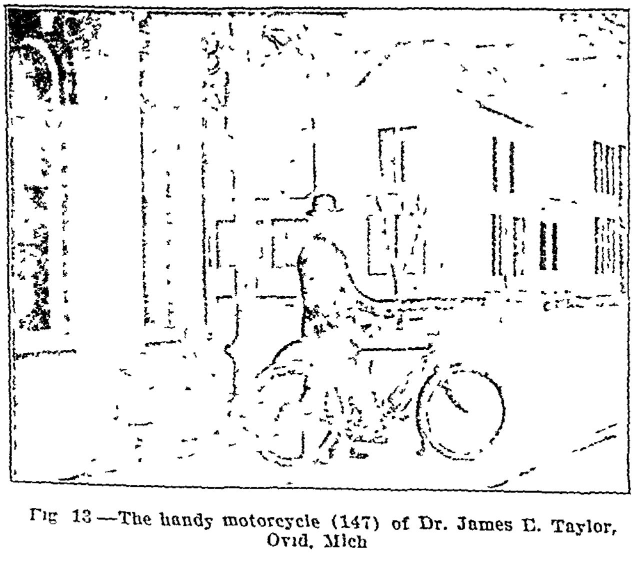

Fig 13.—The handy motorcycle (147) of Dr. James E. Taylor, Ovid, Mich

Franklyn E. McClure, M.D., Detroit.

A BUSINESS PROPOSITION

Last March I carefully read the discussion in the Automobile Number of The Journal, with the discourse on spark-plugs, carbureters, dirt, grease and soiled clothes, all of which was Greek to me. Immediately I sent for catalogues and had agents pester me till I had to seek shelter in the purchase of a car.

The first of May I purchased my first car (110), eighteen horse power, friction transmission, water-cooled, 1,350 pounds, with a rumble seat, with top, for $875. This has carried me all summer without a hitch, on business and pleasure alike. I find that I have not made a mistake in buying a friction-drive car, as it transmits a greater percentage of power than the ordinary bevel gear transmission, and eliminates a considerable amount of trouble common to the clutch.

I love my car for its simplicity, economy, ease of control, and light running It starts without a jerk, runs smoothly and has not the engine throb of the two-cylinder type The speed is thirty-five miles per hour, and the friction transmission allows a large mileage per gallon of gasoline.

The control is simple, with only one lever, which places the friction wheel, traveling on a cross shaft, to any point on the friction disc, which gives the speed. On roads too bad for high speed work, and when slow speed is too slow, the simple adjustment of the friction saves time and gasoline.

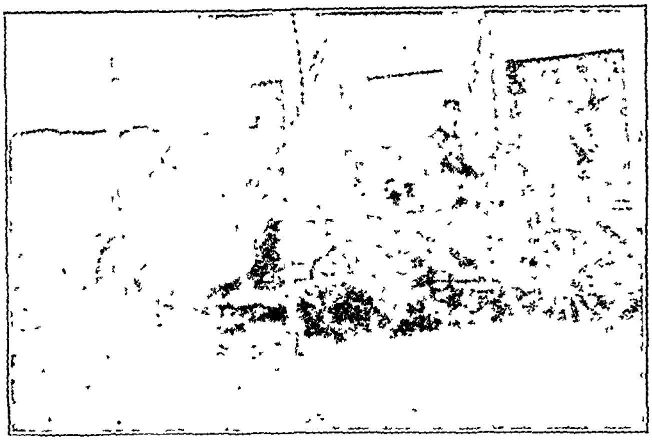

Fig 14.—Cars (176, 178) of Drs E. M. Fisher and H A Ingalls, Roswell, N M

The automobile makes work like play. I come home with a hearty appetite and do not scold my wife and family. Not yet have I failed to make a call, besides having more time at the bedside and more time for recreation and meeting more patients at my office.

I am a struggling young country doctor, with much of my work miles in the country over flint-stone pikes and mud roads; but not for double the price of my car and a few extra expenses for an occasional tire, etc, would I revert to the horse entirely The automobile is strictly a business proposition

A. H. Calhoun, M.D., Wren, Ohio.

A GREAT TIME-SAVER

Since buying my car (172) I have depended entirely on it in all kinds of weather and over all kinds of roads. As yet I haven't found any hills I can't climb around this section. The original cost of a car such as I use is $750, without counting gas lamps and freight. The total amounts to about $800. Gasoline by the barrel cost 10 or 11 cents a gallon. Oil costs 40 cents a gallon in five gallon cans. Solid tires are far less expensive than pneumatic, and there is no danger of punctures. New ones and repainting of the wheels cost me about $30. My expenses for repairs for the fourteen months I have had the car, including new tires, amounted to about $50. The cost per month, including everything, is about $7.60. The original cost and expense of running for fourteen months is little more than that of buying a horse and keeping it for the same length of time. Among the advantages over a horse are that the auto requires only about fifteen minutes or half an hour's care every day (some days not that); that it is ready at all hours, day or night; and that the doctor sees his patients in one-third the time and has more time at his office.

George W. O'Grady, M.D., Lancaster, O.

THE CARBURETOR THE HEART OF THE ENGINE

THE CARBURETOR AND ITS IMPORTANCE

The most delicate part of the automobile power plant is the carburetor, a part that has puzzled the experts and even the most scientific automobile engineers even since automobiles were made a practical conveyance, as well for sport as for commercial use. Internal combustion engines have been constructed and placed on the market in great numbers and a great many have been fairly satisfactory. The general principle of the construction of the machine has remained the same and changes have mostly been confined to detailed improvements, while the little mechanism called the carburetor, which is the vital part of the power plant, has undergone most radical variations in construction. About three thousand applications have been made in the United States Patent Office on carburetors within the last few years. Of course they are all different, which goes to show the wide range of experiment to which the carburetor has been subjected. Yet comparatively few of the many different makes of carburetors remain on the market to-day and of these very few can be said to operate entirely satisfactorily.

Fig. 15.—The start.

The carburetor in most general use is of the float-feed type with automatic air intake; the gasoline is carried in a float chamber with its level slightly below the point of the gasoline spraying nozzle, which is generally mounted in the center of mixing chamber and surrounded by a tube so shaped that, when air is drawn in, it is deflected against the point of the spraying nozzle, and as the air velocity increases, the gasoline supply is also increased. The upper end of this tube is made larger so as to allow the gasoline vapor to expand into the mixing chamber proper where it is joined by air taken in through the auxiliary air valve. This valve is operated automatically by the suction from the engine; it has a delicate spring adjustment which is set so as to allow the right amount of air to enter corresponding to the amount of gasoline vapor drawn through the venturia tube. A low vacuum is always maintained in the intake manifold in order to draw gasoline from the spraying nozzle. As the gasoline is picked up and vaporized by the inrush of air through the carburetor, it can be readily understood that the speed with which the air travels has a great deal to do with the vaporization process. It is therefore very important to avoid as much as possible all sharp turns and corners in the carburetor as well as in the intake manifold. The proportion of gasoline and air required to make a combustible mixture would best be determined by weight, as it depends on the temperature and density of the air and changes in the atmosphere and altitudes will have much influence on the mixture, as in the high altitudes larger air openings in the carburetor or smaller supply of gasoline is needed than in the lower and heavier altitudes. Therefore a wide enough range of adjustment is generally provided on the modern carburetors to allow them to be readily set to n the required conditions.

An over rich mixture will form a carbon deposit in the explosion chamber and on the upper end of the piston which will often cause premature ignition of the gas and when an imperfect mixture is taken into the explosion chamber back-firing will occur. because the globules of gasoline continue to burn for some time after the explosion has taken place and when the intake valve is opened this fire is communicated to the intake manifold causing a second explosion which is partly discharged through the carburetor. Back-firing occurs more often when the spark is retarded because the ignition takes place later, making the actual time shorter between ignition of charge in the cylinders and opening of intake valve; also because the explosion takes place later or after the piston is on its downward stroke when the explosion is much weaker, consequently consumption of fuel is much slower.

When an engine is throttled down to run at slow speed there is no back-firing, because the mixture drawn into the engine consists of air being lightly passed through the manifold and is carrying with it into the engine only enough of fairly vaporized gasoline to make it combustible. If the throttle is then opened very slowly and the engine allowed to speed up gradually it does not back-fire because the air current is given time to pick up gradually and vaporize all gasoline deposited in the intake pipes. If the throttle is opened very suddenly the inrushing air will sweep up all the gasoline deposited both in the carburetor and manifold and will throw it into the engine in drops or perhaps it may be cut up into smaller globules, but if the gasoline is not thoroughly vaporized and the proper amount of air mixed with it, the action will be as before stated and the back-firing will be the result.

Often when not enough of air is taken in at the same time the engine will miss several explosions before it is cleared out. If the attempt is made to stop back-firing by tightening the auxiliary air valve or rather lessening the travel of it the following will be the result: The velocity of fixed air going through the carburetor is increased thereby vaporizing more gasoline, but the total volume of air going through the carburetor has been cut down so that there is not current with sufficient force to sweep the manifold clean of the unvaporized gasoline, especially if the opening in the manifold is a very large one.

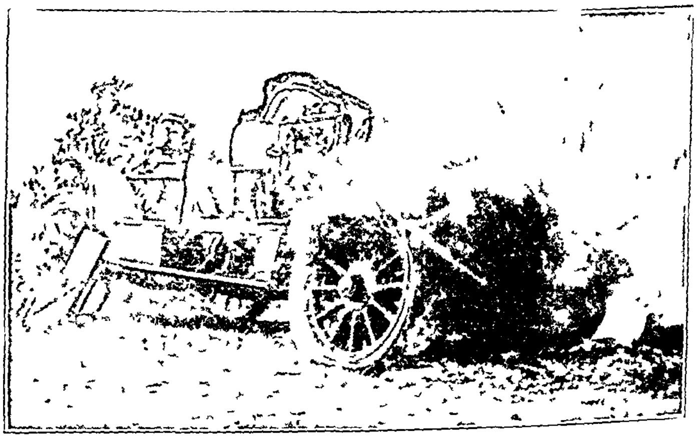

Fig 16—The finish

The same thing that causes back-firing will cause overheating of the engine and exhaust manifold.

If a perfect vapor is made in the carburetor so that when auxiliary air is mixed with it it will be all combustible when delivered to the engine explosion chamber, there should be no trouble to ignite it. The combustion is then quick and perfect; there will be no carbon deposits and back-firing will hardly ever occur because there will be nothing to burn in the cylinder after the exploded charge is cleaned out.

John S. Goldberg, Chicago

THE CARBURETOR AND HOW TO LOCATE TROUBLE

If there is one part of an automobile more important than another, it is the carburetor. It is the heart of the gasoline engine, and, like its counterpart of the human body, is subject to functional disturbance in degrees, ranging from slight departure from the normal condition to utter inability.

It must be remembered that the power of a gasoline engine is due to the explosion of gas formed from the mixture of gasoline (or other combustible) with air in a close chamber. When the explosion of gas thus formed takes place, the confined air is instantly heated to a high degree, and, expanding, furnishes the power that runs the engine. It is necessary that the mixture of air and gasoline should be in the proper proportion, and, as the mixing is the function of the carburetor, we can readily understand the importance of the carburetor being maintained in a perfectly normal condition. Without a perfectly adjusted carburetor, it is impossible for the engine to reach the full limit of its power; it is therefore necessary that the owner should thoroughly understand his carburetor and be able to diagnose all trouble and apply the proper remedy.

A poorly adjusted carburetor will consume more gas and yet develop less power than a normal one. Everything else being equal, a carburetor once properly adjusted will need little or no attention.

To the beginner I recommend that other sources of trouble should be investigated before an attempt is made to correct the carburetor, for many times the fault is elsewhere. Evidence of a faulty carburetor is the lack of power. The engine may run well while the car is standing, but when the clutch is thrown on the car fails to develop the normal speed. Hill-climbing becomes laborious and occasionally the engine fails to develop sufficient power to propel the car on level roads.

It must be remembered, however, that a defective carburetor is not the only cause of this condition.

When the engine fails to develop the normal power it is well to look after the lubrication. See that every part of the engine that requires oil is abundantly supplied; this being the case you can exclude this as the source of your trouble.

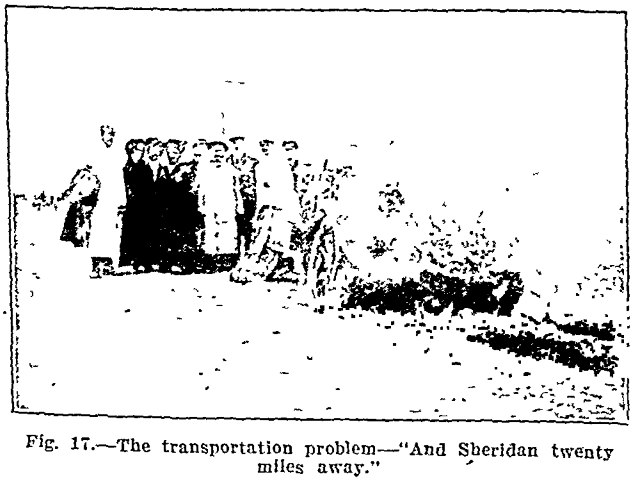

Fig. 17.—The transportation problem—"And Sheridan twenty miles away."

Next go over your cooling system. Be particular to see if the pump is in good working order and that the water is circulating freely and that the supply of water is sufficient in quantity.

If this is in perfect condition you should then search for the trouble in the ignition system. Examine the batteries to see if they are sufficient in voltage to furnish a sufficient spark to explode the gas in the combustion chamber. Test your spark-plug to see if a spark is produced at each contact of the commutator; if not you have probably a short circuit, which should be located and remedied.

If the ignition system is found to be in working order you have now by exclusion brought your trouble down to the carburetor. Before attempting to make alterations in the adjustment, see that the valves that open and close at each stroke of the piston are in working order. Examine to see if there is any obstruction to the free flow of gas to the carburetor. Occasionally particles of dirt find their way to the tube that carries the gas to the carburetor, obstructing the passage. The intake tube, through which the air passes to the combustion chamber, occasionally becomes partially obstructed by particles of grass or dirt being drawn in by the suction, thereby interfering with the quantity of air, destroying the relative proportion of air to gasoline. This tube occasionally needs cleaning and should not be neglected in searching for the cause of trouble connected with the engine.

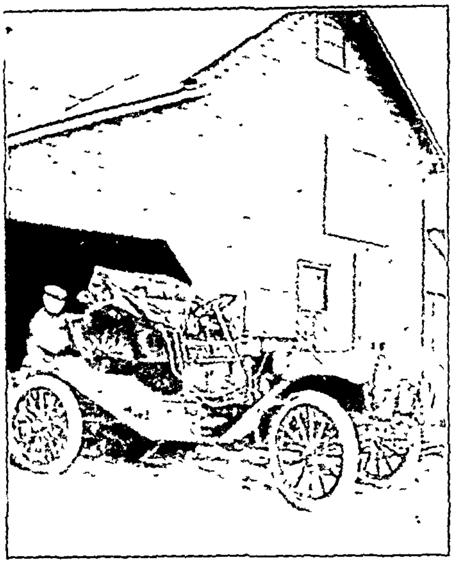

Fig. 18—An Iowa practitioner taking his car out of the barn.

Let the readjustment of the carburetor be your last resort unless you have had experience and can positively locate the trouble in improper adjustment. The engine comes from the factory presumably in perfect working order, and if no accidents have occurred and the carburetor has not been tinkered with, it should be in good working order. It is not always an easy task to adjust an unruly carburetor properly, and unskilled attempts at adjustment may make the task of putting things right more difficult.

Different grades of gasoline may require slight change in the adjustment, yet it is well to wait a reasonable time before readjusting, for often the carburetor appears to adapt itself to the change in gasoline. The different seasons of the year and even the density or humidity of the air may from time to time indicate a slight readjustment. It is well, however, to wait and see if self-readjustment will not take place.

To show to what extent a carburetor can be made to do fairly good work under unnatural circumstances, I will relate a personal experience that may be the means of relieving some one who may find himself similarly situated. I was returning from the country in the middle of the night. When five miles from town my supply of gasoline gave out. I was two miles from the nearest house where I could get a supply. The thought occurred to me that perhaps kerosene oil might work. I took the oil from my oil lamps, put it into the gasoline tank, cranked the engine, and to my surprise and delight the engine responded and my journey was soon completed. At first the engine pounded, but I soon manipulated the throttle so that the pounding ceased and the faithful engine brought me home.

When readjustment seems necessary the operator should start his engine and then slowly turn the adjustment screw to the right and left and note the result. When the point is reached when the best result is obtained, the set-screw should be firmly tightened in order to fix the adjustment.

F. M. CRAIN, M.D., Redfield, S. D.

A DISCUSSION OF HIGH WHEELS AND SOLID TIRES OR LOW WHEELS AND PNEUMATICS

LOW WHEEL AND PNEUMATIC PREFERRED

I have driven four cars in my general practice in a town of 12,000 in southeastern Kansas in the last three years. The time saved by using an auto will pay for a moderate-priced car in one year. The up-keep and running expense is about that of a horse and buggy, while the machine will do as much work as three horses and do it more quickly.

I drive a low-wheeled car (120) ten or eleven months out of the year and observe that when mine is laid up by the weather the high-wheeled car is also quiet. All grant that the low-wheeler has the advantage on good roads (which at this place means ten months in the year), therefore I buy a car for ten months rather than for two. In three years I have had less than a dozen punctures and no blowouts in a road record of 10,000 miles. One good set of pneumatic tires, if not overloaded, will outwear three sets of solid tires and not punish the engine and gearing as do the solid.

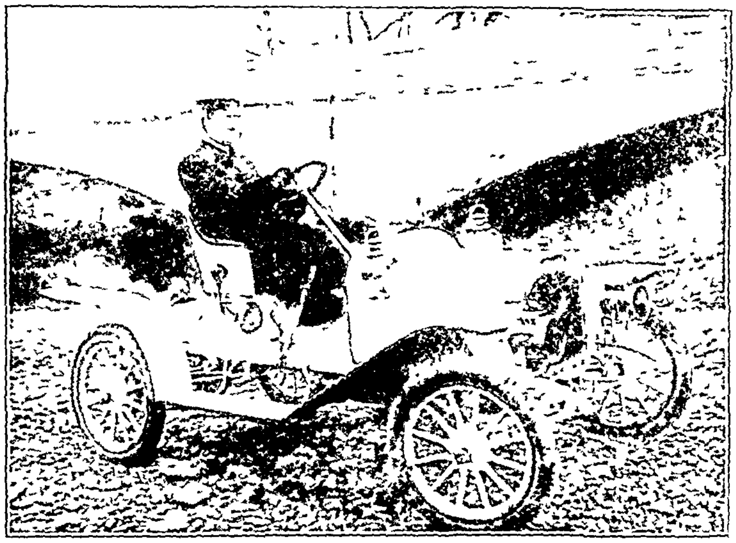
Fig. 19.—Dr. P. S. Mitchell, Iola, Kan., and his car (120)

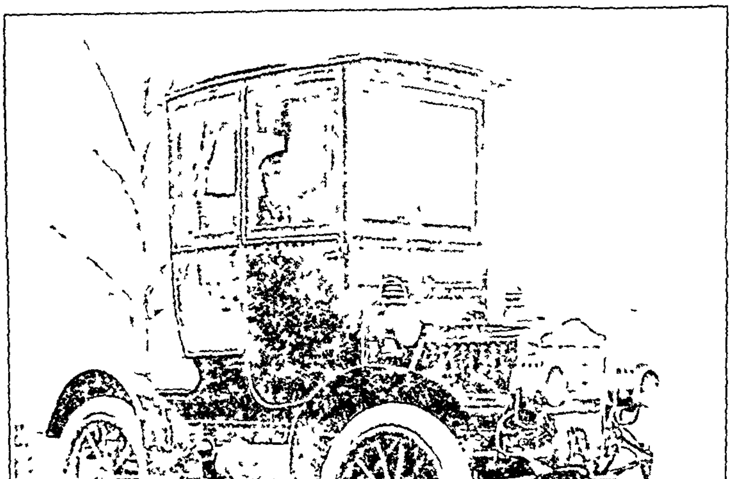
Fig. 20.—Dr. J. B. Hetherington, Logansport, Ind., and his enclosed car (157).

Cold weather hardly enters as an item against water-cooled engines in this climate, while the trouble that air-coolers have teaches me that, as a class, at least, they have by no means been a success. Likewise the two-cycle machines as a class have failed to make good here, principally because of failing to scavenger properly and because of holding compression. I can not see that they vibrate less than the four-cycle cars.

Having owned and driven one-cylinder (121), two-cylinder (120) and four-cylinder (120) cars, shaft and chain drive, large and small, my conclusion is that the car is almost indispensable to the busy doctor. One for the man of moderate means should be about as follows: Price, $800 to $1,200; horsepower, 18 to 24; four-cylinder, four-cycle, shaft-drive, water-cooled, cone-clutch and planetary gear (if a small car), weight 1,500 to 1,800 pounds, 30-inch to 32-inch wheels, 3½-inch pneumatic tires, 90 to 100-inch wheel base, with adequate springs, high tension magneto, runabout body or removable tonneau.

P. S. Mitchell, M.D., Iola, Kan.

ADVANTAGES OF HIGH-WHEELED AUTOMOBILES

High wheels travel all roads, because all roads are made to be traveled by high wheels.

This is the slogan of the builders of high-wheel types of automobiles, commonly known as motor buggies. The term "motor buggies" only partially defines this class of automobiles, however, for the high-wheeled commercial vehicle is now being developed very rapidly and bids fair to outstrip the already well-developed passenger vehicle.

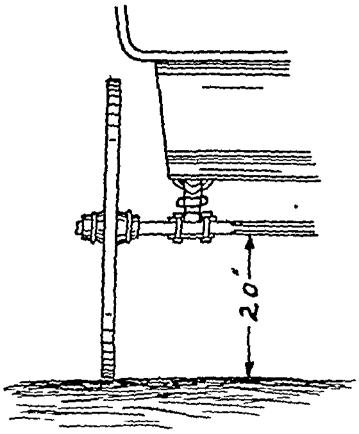

Fig A.—Normal road clearance of high-wheeled machine.

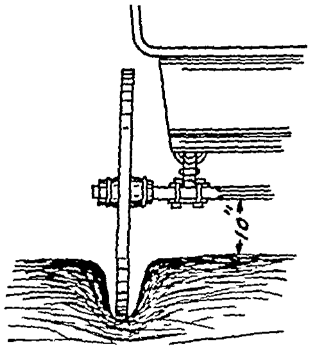

Fig. B.—Plenty of clearance in mud or ruts.

High wheels have a feature peculiarly their own, in their ability to travel all kinds of roads ordinarily traveled by horse and buggy. The low-wheeled types, owing to their low axle clearance, are not adapted to travel over country roads, with their deep wheel ruts or high center ridges. The high-wheeled machines were first built because so many persons found it necessary to travel both city streets and country roads that a demand soon arose for an automobile adapted to both. High wheels allow an axle clearance of from twenty to twenty-four inches, which is as much as that of the ordinary horse-drawn vehicle; hence the justification of the claim that "high wheels travel all roads because all roads are made to be traveled by high wheels."

The greatest bugbear of automobiling to-day is the unreliable, extravagant and even dangerous pneumatic tire. This fact and the demand for greater road clearance are the two great reasons for the popularity of the high wheel. Pneumatic tires are an extravagant luxury, and manufacturers of low-wheeled automobiles would gladly dispense with them to-day if a satisfactory substitute could be devised or discovered.

Solid rubber tires on low wheels are impossible for rapid locomotion or for use on rough roads. They are not only possible, but are entirely practicable on high wheels.

Six years ago the first high-wheeled passenger automobile was placed on the market; for three years it was the sole representative of this type. At the end of that time other manufacturers began to wake up to the fact that this type was fast becoming popular among a certain class of automobile users, and immediately began to experiment in this direction, until at the present time there are between fifty and one hundred manufacturers either building or developing high-wheeled machines.

High-wheeled automobiles as a class are not so widely separated from the low-wheeled automobiles as they were a few years ago, and the difference is rapidly being obliterated. As a matter of fact, the high-wheeled machines are simply a continuance of the wheel diameter where the low-wheeled machines leave off.

Builders of the so-called low-wheeled machines stop at about thirty-six inches wheel diameter, and makers of so-called high-wheeled machines commence at about thirty-six inches and continue up to about forty-eight inches, the height of the ordinary buggy or carriage wheel. Wheels under thirty-six inches usually require pneumatic tires, and thirty-six inches diameter is about the limit for pneumatic tires on account of their cost; whereas wheels over thirty-six inches in diameter do not require pneumatic tires, and hence use the solid rubber tire exclusively.

Instead therefore of using the classification "low wheels" and "high wheels," it would be just about as accurate to classify automobiles as "pneumatic-tired" and "solid-tired." The classification of "high wheels" and "low wheels" is more descriptive of the types, however, and hence is the one generally used.

Automobile builders first adopted the low wheel and pneumatic tire, following the bicycle type, perhaps owing to the belief that pneumatic tires were necessary for comfortable riding and protection to the machinery. It has been found entirely practicable, however, to use large wheels with solid rubber tires with practically the same, and under some conditions better, riding qualities and protection to the mechanism of the machine. When this fact was demonstrated beyond a doubt, the professional and business world immediately turned toward the high-wheeled, solid rubber-tired type of automobile as being more economical of up-keep and as offering greater roadability.

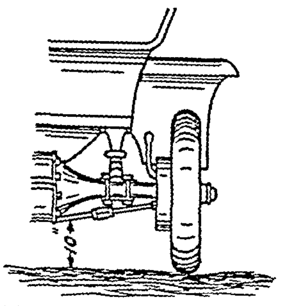

Fig. C.—Normal road clearance of low-wheeled machine.

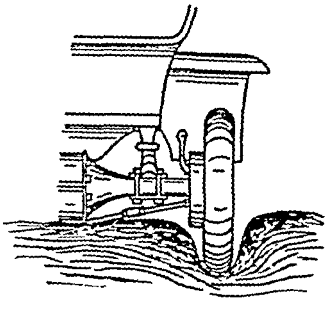

Fig. D.—Lack of road clearance in mud or ruts.

An important feature of the high wheels is that, being narrow and protected by steel channels, the rubber is not injured when the wheels are traveling in deep ruts, as the tires escape the terrific rasping effect of the dried or frozen sides of the ruts which so quickly tear the pneumatic tires to pieces.

High wheels consume less power on rough roads than do low wheels, because an obstruction is less of an obstacle to a large wheel than to a small one. As a hill is nothing but a series of obstructions, high wheels are therefore also better hill-climbers than low wheels.

Strange as it may seem, high wheels are really stronger and less liable to break than low wheels. This is due to the fact that all high wheels are dished, so that when the vehicle skids sideways and strikes an obstacle, the dish of the wheel acts as a truss and braces it. Low wheels are not dished, but have the spokes set perpendicular to the hub, and hence are unable to withstand a severe side strain or shock. Then, too, the long spokes of the high wheels are flexible and will bend considerably before they will break; whereas the spokes in the low wheels are too short to be flexible, and since they can not bend they break. The long spokes of the high wheel also render the wheel somewhat resilient, and there is less necessity for pneumatic tires than on the low wheels, the spokes of which are absolutely rigid.

High-wheeled automobiles are now in use in every civilized country in the world, and have demonstrated that they are here to stay, as they meet requirements for which they alone are peculiarly adapted. The field for this type of vehicle is just barely touched, but it is spreading rapidly now that the gasoline motor has been made thoroughly dependable in the hands of an ordinarily careful user.

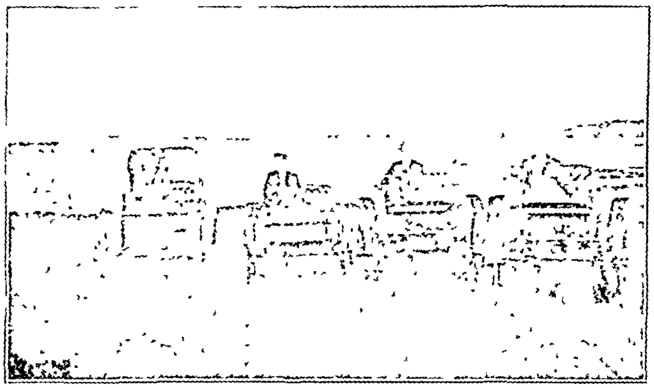

Fig 21 —A group of high-wheelers (191) in North Dakota, some of which have been in use four or five years.

Physicians and other professional men early welcomed the high-wheeled machine with the high-road clearance and trouble-freed solid rubber tires, and now the department store, fire department, mail-carrier, laundryman, groceryman, liveryman and scores of other businesses are already making extensive use of this most sensible and serviceable vehicle.

Being now completely commercialized, it is recognized in all automobile shows, expositions and trade papers as a standard type. Its development and growth have been spectacular.

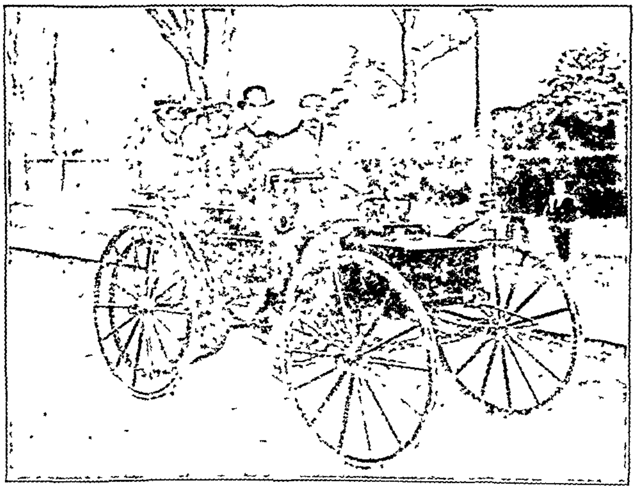

Fig 22 —A high wheeled car (168) in New Zealand.

The low first cost and economy of up-keep, together with the great possibilities of the high-wheeled car, make it very probable that within the next five years there will be more high-wheeled automobiles in use than of any other type.

W. HILDRETH, Chicago.

USES BOTH STYLES

I have been using motor vehicles exclusively in my practice since July, 1903. I now use an enclosed automobile (157) of the direct drive, pneumatic-tired type except on muddy roads, when I use an enclosed machine of the high-wheeled type

(158). Both machines have double opposed cylinder of twelve horse-power, are very simple in construction and reliable.

I consider the pneumatic tire better adapted to ordinary roads and more comfortable on them. There is not so much vibration and the machine looks better. When the road is muddy it requires much more power to force a pneumatic tire through the mud than a narrow solid tire, but when the roads are good, riding on air is far more comfortable. In mud one gets bumped anyhow, and it is unpleasant to have the engine working to its limit against the mud when the high wheel with narrow tire goes so much more easily.

For practical work a physician's machine should be as simple as possible. Either type of bare tires will slip in slick mud, though the pneumatic holds best on ice.

The pneumatics are a little more expensive than solid tires, though not as much so as one would expect, if large pneumatics in proportion to their load are used. The solid tires batter to pieces, while the pneumatic continues good. A heavy car means tire expense with either solid or pneumatic tires.

I prefer an engine under a bonnet where it is easily inspected. On my old car (159) it was difficult to get at the engine under the bed. Then I was always afraid of the chain drive. One of our physicians has been wrecked twice with different cars by having his chain climb the sprocket.

J. P. Hetherington, M.D., Logansport, Ind.

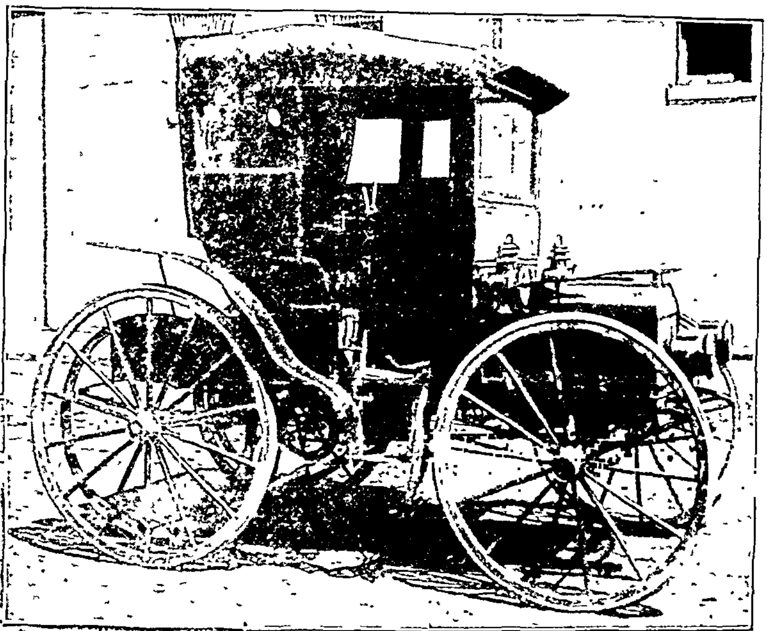

Fig. 24.—The inclosed carriage (102) of Drs. P. E. and Fred Sheppard, Hutchinson, Minn.

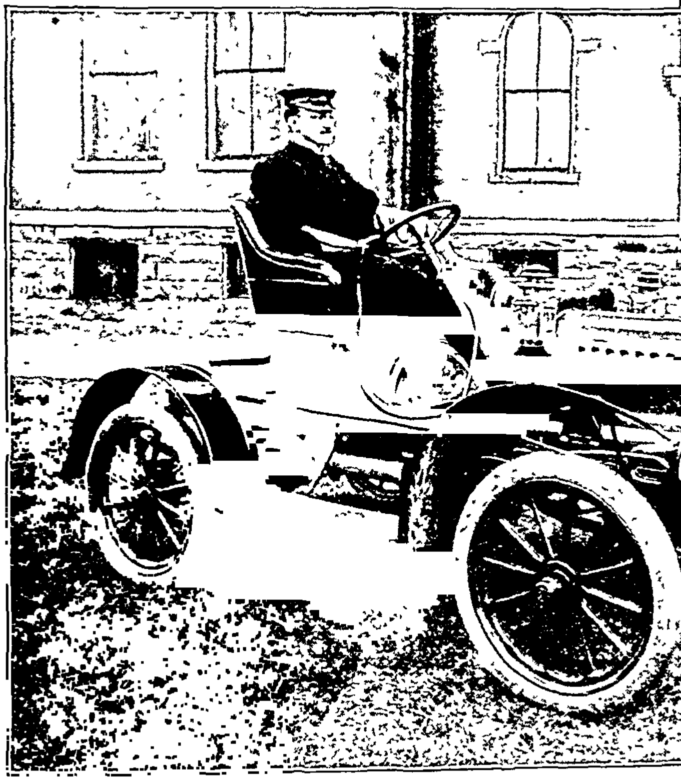

Fig. 23.—Dr. M. P. Hughes, Gadsden, Ala., in his trim motor car (109) referred to on page 809.

HIGH-WHEEL AUTO NOT FANCY BUT PRACTICAL

A year ago my brother and I were in the catalogue stage of buying an automobile. We looked forward to the coming of the Automobile Number of The Journal as one of our main sources of help in deciding what kind of a machine to buy. We decided in favor of a hard-tired, high-wheeled machine (102), so now we wish to add our testimony that it may help some one else.

We have a medium weight twelve horse-power machine, with a full shelter top, which insures comfort in bad weather. We believe that it does not pay to run any machine in mud, but if we get caught in a rain we can always get back without getting wet or spattered with mud. After a rainy spell we are always out several days before any of the low-wheelers because we can run in a rut. We ran up to December 15, when enough snow fell for sleighing. We ran in ten below zero weather with comfort and ask nothing better than a rut to run in on frozen ground. You can not do that with pneumatic tires.

The cost of up-keep is low. Our first set of tires will last us well into the coming season, and they cost $7 each for the best grade of rubber. You can not keep a team shod cheaper than that.

One reason we selected this machine was that it is made by an old reliable carriage house with an established reputation, and we knew them to be strictly on the square. Their work and material is first-class, and if anything is not right they will make it right. As much can not be said of some of the mushroom automobile houses.

The high-wheeled automobile is not a fancy rig, nor is it as speedy or comfortable as the other type; but it is cheap in original cost and up-keep, and will go when the others will not. It is cleaner, too, for the doctor, because there is less dust and because all parts are easy to get at.

Our conclusions, then, are: If you are buying a luxurious machine for pleasure, to run fast in fair weather and on good roads, and if expense is no object, get a low one with pneumatic tires. If you are buying for business and economy, get a hard-tired, high-wheeled one. It is a good investment.

P. E. Sheppard, M.D.
Hutchinson, Minn.

A SAD EXPERIENCE WITH HIGH WHEELER

In the spring of 1908 I bought a high-wheeled runabout (140) for $500. From the start it has been a series of breakdowns and disappointments. The mechanism is so loosely put together and so poorly devised that it makes more noise than a farmer's wagon. Instead of steel I found cast-iron in many places such as rocker beams, high-speed traveler, clutches, etc., that were continually snapping off. The chains being so light as to stretch on the hills, would keep running off the sprocket wheels.

In this country the cobblestones in the road constitute the greatest obstacle to any enjoyment in a high-wheeled auto. Those cobblestones just knocked the machine out of adjustment and broke the bearings as a regular thing. When the management remedy these weak places I presume this machine will do on smooth dirt roads; but for cobblestones and hills it is too cheaply constructed for daily use.

My engine being air-cooled, I had visions of running through the snow; but it was only a pipe dream. The machine absolutely won't work when the temperature is less than 20 degrees above zero.

Altogether, I am sore on high-wheeled, solid-tired auto buggies. H. C. Worthington, M.D., Beloit, Wis.

QUESTIONS ASKED AND ANSWERED

Is the automobile a reliable and satisfactory substitute for the horse-drawn vehicle for the doctor's use? Yes, for doctors practicing in cities and towns. In any country district where the roads are fairly good, also yes. For muddy, clay or slippery roads in wet seasons, no. Sand has been regarded as a serious objection, but if the tread of the automobile is the same as that of the other vehicles using the highway this objection does not obtain.

Is the up-keep greater than for buggy and team? This depends entirely on the driver. One man will take care of machinery and another will not. If one horse and buggy will do all a physician's work, and if he does not need a driver, an automobile will be a greater expense. If he has a large territory to cover and requires more than one horse, an automobile will save many hours each day, cost less to operate, and the greater amount of work permitted will greatly increase the income.

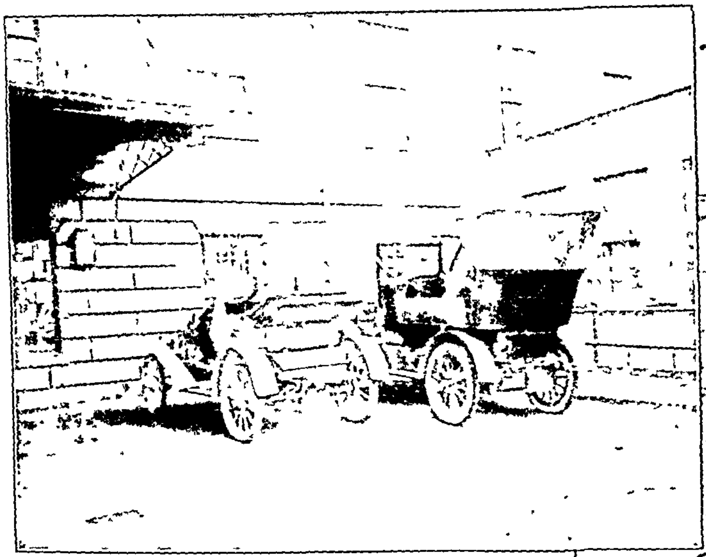

Fig. 25.—Rear view of Massachusetts General Hospital, showing cars (195) of two of the attendants, Drs John Bryant, Jr., and Herman F. Vickery, Boston.

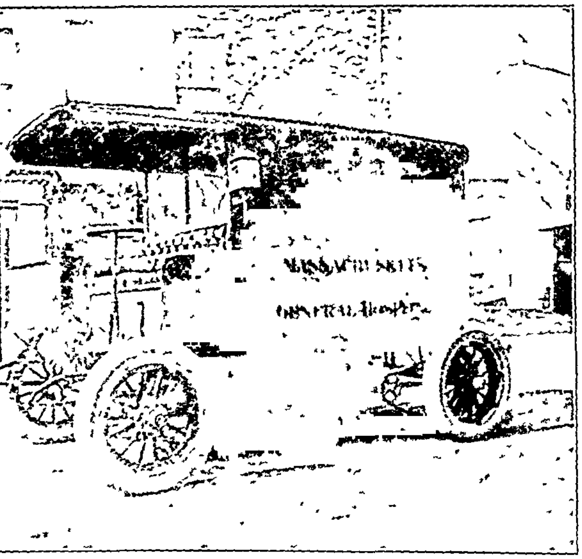

Fig 26.—One of the automobile ambulances of Massachusetts General Hospital

Does not the first cost make the automobile a luxury, and does not this investment deteriorate more rapidly than with horses and vehicles? Once again, this depends on the driver. I have run my car over 12,000 miles, as roughly as is possible, over every imaginable sort of road, but it is in better shape, runs more smoothly, has more power, requires less attention, than during the first year of its service. I believe that with the same care it is getting at present, six or eight years is too short an expectancy of life. Its average cost to me, excluding original price, has been $50 a month. This is $25 less each month than my horses and buggies and driver cost me for several years. I bought a high-grade car (125), $3,000 list price, twenty to twenty-four horse-power, four cylinder, double chain drive, two or four passengers. I use it exclusively, and am so well pleased that I would not go back to the horse for any consideration; I had rather quit general practice. Not only this; to live without a car would be next to not living at all.

What type of car should a physician buy? In a large city, any will do the work; means and individual taste should be the guides. No further advice is necessary. In small towns or country the consideration of this problem is important, for on its successful solution and on careful discrimination depend great pleasure on the one hand and profound disgust on the other. Here high power, medium weight and extraordinary strength in construction are essentials. Exceedingly strong axles and frame, and greatest possible strength and flexibility in springs, supplemented in all cases with shock-absorbing devices, must not be overlooked.

What about the high-wheeled car? I bought one (124) for wet weather, and am having it remodeled. It ran indifferently for three months. Timer and coil were cheap and useless; chains too small, sprockets of poor construction, and the oiler was a joke. I am having these replaced with standard and tried types and hope to have a car which will be durable and usable from the business point of view. I fear that many cars of this type are made cheaply and to sell. This car is not now on the market, I understand. I believe that, when block chains are discarded and the speed is reduced to a maximum of fifteen miles an hour, and when the same quality of materials are here used that are employed in the regular types, then a motor buggy will be the cheapest and best possible means of conveyance for the country doctor, and one that will absolutely supplant the horse.

Think of a speed of thirty miles an hour for a motor buggy! Only a fool or maniac would dare approach it. Yet such machines are made to travel that fast, at a great expense of power, on paved streets or macadamized roads. Low speed means high power; a ten horse-power engine geared for thirty miles an hour will not negotiate the ordinary roads satisfactorily on high speed. The average ratio of gearing in these vehicles is 1 to 5, when it should be 1 to 8 or even 1 to 9. If you are going to buy a motor buggy get either a low speed, heavy roller chain drive, or at least 1¼ inch pitch with ⅝-inch roller chain, 12 horse-power, 36 or 38-inch wheels, planetary transmission, wheel steer, or postpone your purchase, or buy a single-cylinder machine for the same price. F. G. Du Bose, Selma, Ark.

Ninety per cent. of automobile troubles, probably, were removed when I had my car (170) equipped with a magneto (171). Since that time I have run it every day over mud, snow, ice and good pavement with the exception of one week, when it was too cold for comfort—all this in southeastern Wisconsin, which is not noted for its good roads, and without one cent for repairs of any kind. The car is always ready to go. I can get greater mileage at a faster rate and with less inconvenience than I could with any horse.

L. F. Garlock, M.D., Racine, Wis.

THE LUBRICATION PROBLEM

SOME PLAIN STATEMENTS ON OILS

I sincerely regret that I am not as able as I am willing to give information of more practical value in regard to the lubrication of motor cars. This is not due to lack of knowledge, for I have had a quarter of a century of experience in the manufacture of high-grade lubricating products made from petroleum and a thorough and scientific knowledge of the chemistry of oils. I have also had several years of experience in the lubrication of my own cars and those of my friends.

It is an unfortunate fact that there is no one test or combination of tests that is of much or any value in the hands of the layman, however valuable these tests may be in the hands of an expert. As a few cheap tricks in blending can give to a very inferior oil the physical characteristics, or qualities answering scientific tests, that pertain to the best oil, about all that I or anyone can do is to give some broad facts and expose some of the deceit and duplicity with which the business is saturated.

In the operation of a motor car, oil is used for the lubrication of the bearings and of the cylinders. In the lubrication of the cylinders the most important function of the oil is to form a packing for the rings so as to prevent the force of the explosion passing by the rings with consequent loss of power; hence it follows that the more viscous or heavy-bodied the oil may be and the more freely it is applied, the better will be the compression and the more power produced. And, I may add, that where cylinders are not ground to perfect roundness and well polished, or where the rings do not fit or are weak, it is all the more essential that an oil be used that will maintain a high viscosity or consistency under heat.

Any half-way decent oil is good enough if freely used to lubricate the cylinders, so far as the item of lubrication is concerned; and a comparatively poor oil freely used will produce compression if the cylinder is highly polished and perfectly round and the rings are an exact fit and strong. But these conditions seldom are combined, hence, to produce the greatest possible amount of power, a highly viscous oil must be used and used freely.

With every increased degree of heat the troubles of lubrication multiply. The higher the heat, the more the oil is liquefied, so that it forms a poor packing for the rings, and hence the more essential is it that a highly viscous oil be used. But, unfortunately for the man who operates an air-cooled car, the more highly viscous an oil is, the more carbon it produces; hence a selection must be made between comparatively poor lubrication and comparatively poor compression, with comparatively little carbonization on the one hand, or better lubrication, better compression and some more carbonization on the other. There is no getting away from these facts.

The claims made by one and another that the oil they sell is non-carbonizing are utterly untrue, as there is no oil made or ever will be made that will not produce smoke when burned; in other words, that will not carbonize under heat. Broadly speaking, the poorer the lubricating quality of the oil, the less it will carbonize. This is equally true as applied to an air-cooled or water-cooled car. This is true, however: an oil that will give comparatively little carbonization and comparatively good compression in a water-cooled engine, run at a moderate heat, will give a good deal of carbonization and poor compression and poor lubrication in an air-cooled motor.

Whether a man runs an air-cooled or water-cooled motor, he must make his choice between an oil giving poor lubrication and compression and comparative freedom from carbonization, or the reverse; or, to put it another way, between a blended oil of high viscosity or a straight neutral oil of weak viscosity and poor fire test.

The four chief products or distillates from petroleum include gasoline, benzin, burning oil or kerosene, and what is commercially known as neutral oil or familiarly known as spindle oil. This is the last thing distilled over in the operation of reducing petroleum for cylinder oil, such as is used in steam cylinders. Paraffin oil is produced by the destructive distillation of petroleum tar or the carbonized oil that is left in the bottom of the still, and is the poorest of all petroleum products, so poor that it is seldom sold under its proper name. It is acid-bleached sometimes to a pale lemon, but generally of a dark red color. It runs in gravity from eighteen to thirty, but more ordinarily from eighteen to twenty-eight.

Neutral oil runs from thirty, or more ordinarily from thirty-one to thirty-five; so, unless trickery has been employed in blending the two, a hydrometer test will at least tell the buyer whether he is using paraffin or neutral. Neutral oil is made all the way from absolutely water-white to comparatively dark red. A neutral oil is a much better lubricant than paraffin, although a more fluid oil at normal temperature and has less tendency to carbonize. All of the better grades of gas engine cylinder oil on the market are either straight neutrals or neutral blended with filtered cylinder oil.

Now, it is an unfortunate fact that a straight neutral oil, extremely fluid at normal temperature, becomes much less viscous under heat, and the higher the heat the thinner it becomes, and hence the less compression it will produce. But it has the advantage of giving comparatively little carbonization, and the higher its gravity and the less viscous it is, or in other words, the poorer the quality, the less the carbonization and the poorer the lubrication.

The real lubricating value of petroleum lies in the residual left in the bottom of the still after the distillates and neutral oil have been distilled off; in other words, the cylinder oil, such as is used in steam cylinders. This, as compared with neutral oil, is enormously high in viscosity and in fire test and in lubricating value, but unfortunately, for reasons above stated, has a greater tendency to carbonize.

I have found that the addition of a moderate percentage of cylinder oil, whether used in air-cooled or water-cooled cars, adds immensely to the lubricating value of a neutral without materially increasing the carbonization.

Dealers in automobile oils well nigh universally recommend a straight neutral oil, as it is attractive in appearance, cheaper, easier to sell and produces less carbonization, the evils of which are immediately manifest, while the result of undue wear is remote and the loss due to improper compression is not recognized. A properly blended oil will ordinarily give 25 per cent. more power than a straight neutral, and under some conditions 50 per cent. more. Except when trying out oils, I have always used a blended oil on my own cars. On taking out the engines after a run of 10,000 miles, I have found them highly polished, the rings free from any carbon deposits, not a bearing anywhere in the car that even showed a trace of wear. I have seen the same make of car, handled by a better man than myself, run with much less mileage, lubricated with best neutral oil that money would buy, on being taken down, show very serious undue wear. The average chauffeur prefers a straight neutral, and the poorer the quality the better he likes it, for the reason that it produces somewhat less carbonization than a blended oil. Although a blended oil costs more to manufacture than a straight neutral, I prefer it for my own use, not because it is more economical (as it is), but because I want out of my own car the greatest amount of power and the least undue wear. I should add that the cylinder oil used in blending should be a well-filtered oil.

A word in regard to the matter of color. A neutral oil is red as it comes from the still. This can be bleached with sulphuric acid at hardly any expense or filtered through bone and fuller's earth, until it is exceedingly light in color. Neutrals are made all the way from water-white to dark yellow. The assertion made by some that an oil extremely light in color contains less carbon than a yellow or red oil is a piece of rank duplicity without even the semblance of truth except in a purely technical sense. The small amount of carbon in a comparatively dark red oil would under no circumstance whatever leave even a trace of carbon deposit; it would not do it if it were as black as ink. It is the burning of the oil that produces the carbon deposit; just this and nothing else, and the richer and better the oil the more carbon deposit it will produce.

After all, the use of a low gravity gasoline is more productive of carbonization than lubricating oil. Much of the gasoline on the market is practically nothing else than a low-grade kerosene blended with high gravity gasoline, and hence, is a smoke producer.

My entirely disinterested advice to the operator of either an air-cooled or water-cooled car is to use the most viscous oil obtainable that will not result in undue carbonization.

Just a word regarding the lubrication of gears. If grease is used let it be as soft as may be without undue leakage through the cracks. Where too hard grease is used, an undue retardation is occasioned. A hard grease makes the car run heavy. I consider the use of a coarse-flaked graphite desirable, chiefly because it forms a cushion and makes the gears work more quietly.

T. T. Southwick, Rochester, N. Y.

DISSOLVED LUBRICATION FOR GASOLINE MOTORS

The lubrication of motors by dissolving the lubricating oil in the gasoline, and thus leading it into the motor with the fuel supply, has aroused not a little interest in the gasoline engineering world, though the process is by no means new. It has been used for many years in some two-cycle motors, where the gasoline with the lubricating oil is sprayed into the crank case, whence the gas is afterward forced into the cylinders while the lubricating oil remains to lubricate the pistons and bearings.

The process is good for two-cycle motors of the crank case compression type, and has no disadvantages. It is just as good for four-cycle motors, providing the crank case be used for the passage of the gasoline spray or gas from the carburetor to the cylinders and providing the moving parts and bearings of the motor may be exposed to the free application of oil from the crank case, as is usual in automobile motors. It requires the inlet valve to be placed between the crank case and the cylinders, preferably in the piston head, where its proper operation is assisted by the movement of the piston and the inertia of the valve itself.

The simplicity of the process is its chief advantage. All good lubricating oils are thoroughly soluble in gasoline in the proportions necessary for proper lubrication. The oil when dissolved in the gasoline has no effect on the operation of the carburetor or vaporizer. All that is necessary, therefore, to lubricate the working parts of a motor arranged for it is to ascertain the amount of oil per gallon of gasoline fuel and add that proportionate amount to the gasoline tank with each new charge of gasoline. No anxiety need follow as to whether the motor is being lubricated or whether the lubricating mechanism is working or discharging the proper amount to each of the several places needing it, for so long as the solution of fuel and oil lasts the motor will receive its regular quota of oil without any variation and exactly in proportion to the amount of fuel used, and hence in proportion to the amount of work the motor is called on to perform.

The process is easily understood. If a small quantity of non-volatile oil be dissolved in gasoline and sprayed from an ordinary atomizer into a warm cylinder or cup of metal or glass, it will be found that the gasoline spray issuing from the nozzle immediately vaporizes and becomes an invisible gas and the non-vaporizing oil of the spray condenses and is deposited in a thin sheet of very fine globules on the interior surface or falls to the bottom. This is exactly what happens in a gasoline motor arranged for this method of lubrication. The gasoline enters the nozzle of the carburetor from the supply tank as a liquid carrying its quota of oil in solution as easily as water would carry a small quantity of salt in solution. When it leaves the carburetor in the form of a fine spray and enters the warm crank case the gasoline instantly becomes gas and the oil spray, which can not thus vaporize, is instantly condensed, and as it enters in swift motion, if directed toward the parts needing lubrication, it will be deposited instantly on them and thereafter fulfil its function as well as if it were forced to the place by another process.

Since the gasoline tank and pipe must be liquid-tight to hold the gasoline, and since the whole process of separating the oil from the gasoline is a suction process, there can be no loss of oil and no distribution of it over the outside of the motor and machine, where it serves only to hold dust and dirt and to communicate it eventually to other parts and to the operator's hands and clothing. If there were no other advantages, this one of cleanliness would commend this process to all automobile users.

The mechanical advantages of this method of lubricating gasoline motors over any other method are so apparent that it seems scarcely necessary to mention them. The cover to the opening in the gasoline tank of a gasoline automobile or boat can be arranged with a cup on the inner side and graduated so that when the gasoline tank is replenished with gasoline the corresponding amount of lubricating oil may be poured into the cup and dumped into the tank, presto! the lubrication is attended to once for all as long as the motor runs on that charge. There is no chance that it may be affected by the cold; that a warm place will get more than it needs and a cold less; that a feed pipe may be broken or disconnected or choked.

When the solution method of lubricating the motor becomes common all these exasperating difficulties will have vanished.

H. K. Holsman, Chicago.

BALL AND ROLLER BEARINGS

In motor construction the chief advantages of ball and roller bearings over plain bearings are: Longer life of the bearings, elimination of the necessity of scraping and refitting bearings, possibility of attaining greater speed with their use, simplification of the oiling problem, and saving of power; that is, fuel.

The chief objections are the original expense and the liability of breakage. The first is offset by the various savings in oil, fuel and repairs just mentioned. The second objection is being overcome by the advance in construction, which is attested by the continual extension of the use of the device to new parts.

Practically every car now uses the annular type of ball bearings in transmission cases and shaft-driven mechanism. The advantages of ball bearings on cam shafts are also admitted to be great. The next portion of the mechanism to which this device seems about to be successfully applied is the motor crank shaft. The strain on ball bearings in the crank shaft is greater, to be sure, than on the bearings in some other parts of the car; but ball bearings are successfully used in other mechanisms in which the strain is much greater. Many cars of foreign make and design have cylinders of *en bloc* construction (cast solid), the object being to shorten the crank shaft and permit the use of ball bearings on it.

It has been predicted that, in the near future, no car can be successfully marketed as a first-class machine if it has a plain-bearing motor. John Wilson Brown, Philadelphia.

KEEP AUTO CLEAN AND WELL OILED

A physician who has used both horse and automobile needs no argument to be convinced of the merits of the auto. He has more work time, more leisure time and more pleasure all the time. The up-keep cost will depend almost entirely on the care and judgment used by the driver. Keep the machine free from dirt and well lubricated, use some discretion in driving over rough roads and the up-keep cost will be very little. I have never seen any great difference in lubricating oils, having used them varying in price from 22 cents per gallon to $1 per gallon. I have a runabout (auto 161, illustrated on page 809), which does about all any one could ask of an automobile. You do not have to have a $10,000 cash practice to own an automobile as I have seen stated by some physicians. Doctor, get an automobile and take your wife with you on your country trips and see how much more pleasure there is in making country calls.

B. S. Herring, M.D., Wilson, N. C.

PROTECTION FOR PNEUMATIC TIRES

A SUCCESSFUL EXPERIENCE WITH TIRE PROTECTION

I am now in the fourth consecutive year of my use of the automobile in my daily work, and I would not willingly exchange it for any other mode of conveyance. My single-cylinder runabout (104) has given me the fullest measure of service and satisfaction, together with no small degree of pleasure. It rarely gets out of order, and it goes fast enough and far enough for all professional and even for emergency purposes. I ride constantly with my top, as well as glass storm-shield up, winter and summer, fair weather and foul weather alike, as I find these admirable protection against wind, dust, rain, sun, cold. I have been rather fortunate of late in the matter of tires. Punctures have been happily few, and casings (185) have as a rule outlived the guaranteed mileage of 3.500 miles. I have found no economy in retreading worn casings, as it is in the fabric ratherthan the rubber that yields in the occurrence of blow-outs. I avoid skidding and side-slipping by careful driving. I estimate that I cover on an average about twenty miles a day at an outlay within $2. divided almost equally between first cost on the one hand and maintenance, including repairs, renewals, etc., on the other hand.

Augustus A. Eshner, M.D., Philadelphia.

PROTECTION FOR PNEUMATIC TIRES

The pneumatic tire, on account of its capacity for absorbing shocks, is almost essential for use on automobiles intended to be run at even moderately high speeds. The ordinary rubber pneumatic tire, which at the present time is considered the most satisfactory, has this capacity for absorbing shocks in a high degree, but is comparatively frail and is liable to injury from several sources. Nails, glass, scrap iron, stones, etc., may puncture it, rendering it temporarily or permanently useless; or even when not piercing through so as to cause a leak, may damage the outer shoe. Objects not sharp enough to puncture or cut the tire may strain or even burst it if struck hard enough. The road has a steady wearing effect that will in time wear the tire thin enough to weaken it and cause bursting. And finally light, heat, air and sometimes oils act on the rubber, causing deterioration. It is the office of the tire-protector to shield the tire as much as possible from these injuries.

Tire protectors are of two types, those that are placed outside the tire shoe and those that are placed inside it. These last are really tube-protectors rather than tire-protectors, for they do not protect the shoe except perhaps indirectly by relieving it of some strain. Protectors of the inside type are very little used and it is a common opinion that they cause as much trouble as they prevent, for they frequently wrinkle or roll up, tearing the tube and sometimes bursting the tire shoe. Inside protectors doubtless prevent punctures to a certain extent and strengthen the shoe, preventing some blow-outs, but in order that they may be used satisfactorily tires must be blown very hard; and since the inside protectors stiffen the tire they detract somewhat from the easy riding qualities. Except for the partial protection from punctures and blow-outs, they give no protection against the injuries mentioned above.

The outside type of protector affords protection in a greater or less degree against all the injuries mentioned in the first paragraph except possibly the action of heat. These outside protectors are generally made of chrome leather studded with steel rivets. This steel-studded leather is practically puncture-proof and proof against injury from any of the sources mentioned, except the natural wear on the road. Such protectors not only protect the tire from injury but are excellent anti-skids. The use of chrome-tanned leather is almost absolutely necessary for these protectors, for leather tanned in this way does not shrink or stretch when wet, and does not rot rapidly when kept moist, as bark-tanned leather does. Chrome leather is the toughest leather that it is possible to make, and when compressed by having the steel studs riveted tightly at close intervals, it is practically proof against punctures even from nails.

When the first leather protectors were put on the market there was considerable complaint on account of their causing the tires to heat. This was owing to the fact that the leather, which is a very poor conductor of heat, held in the heat generated by the tire. This trouble has been overcome by allowing the prongs or stems of the steel rivets to pass entirely through the leather, instead of covering their inner ends; so that their clinched ends come in contact with the rubber of the tire and carry the heat to the heads, which, as they revolve through the air, throw it off rapidly. These clinched ends are made so smooth by the improved machines now used that they do not make even the slightest mark on the tires.

Another common trouble with the first protectors was the chafing of the tire. This trouble was caused by the stretching of the cover, which then became slightly larger in circumference than the tire, so that in rolling over the road it ought naturally to roll a greater distance at each revolution than the tire. The protector being held on the tire so that it could not do this, the difference in the circumference had to be made up by slipping. This took place not only with the detachable protectors held by mechanical means to the rim, but also with those vulcanized or cemented to the tire: for the portion that came in contact with the road would separate from the rubber underneath and chafe or wear it until the tire was destroyed. In the covers now commonly used, this trouble has been overcome by providing means of adjustment to tighten them when loose, and by fastening them to wires on each side instead of to the rim or tire, so that if there is any difference in circumference between the tire and cover, the cover can roll on the tire enough to make up the difference. With covers put on in this way the tire receives a slight amount of wear on the sides, but little or none on the middle or tread portion.

There is a common impression among persons who have had no experience with tire-protectors that dirt or sand will work in between the cover and the tire, causing serious damage. Such, however, is not usually the case. The dirt or loose particles between the two have a tendency to work to the sides where they can fall out; in the same way that dirt, which gets under the rubber of an old tire through cuts on the middle works to the sides and forms blisters. This is owing to the fact that there is greatest pressure at the middle and less toward each side, so that the dirt is squeezed out by pressure. If tires are run poorly inflated, they have a tendency to buckle back in the middle toward the rim where next to the road. so that the load is carried on the sides instead of the middle, and the dirt is then held in the middle between the tire and the cover. I might say here that tire-protectors will not appreciably prolong the life of a tire that is not kept at least somewhere near the proper pressure. The lowest pressure that is generally recommended for tires is fifty pounds per square inch for three-inch tires, and ten pounds more for each half inch larger than three-inch. If one does not use a pressure gauge, a good rule is to blow the tires hard enough so that a man, standing on the hub and springing up and down, can cause no perceptible movement of the tire on the ground. If the tire is not kept within at least ten or fifteen pounds of the proper pressure, the protector can not preserve it, for the excessive flattening on the road bends the walls of the tire so sharply that they are soon weakened, causing the tire to burst or blow out from weakness, rather than from outside injury.

The speed or power of a car is to a certain extent affected by the additional weight and stiffness of the protectors. The effect, however, is very slight, especially with the detachable or separate form of protector, which with the tire acts like the leaves of a spring that are much more flexible than a single piece of the same thickness.

The metal-studded leather protector, when made and applied in such a way as to avoid heating or chafing the tire, will protect it against all ordinary injuries from the outside, and if the tire is kept well inflated it will last several times as long as when run bare. When tire-protectors cost almost as much as tires, there was some question as to the economy of using them; but now, when they can be bought for about one-half the price of tire shoes, they are undoubtedly money-savers. The life of a good protector is about the same as that of a tire—3,000 to 4,000 miles—and they are generally guaranteed for at least 2,000 miles. On oyster-shell roads and flinty or stone roads that cut the rubber tires, they generally last longer than the bare tires, while on pavements or macadam roads that grind off the steel studs, the rubber tire will often give longer wear. If we consider the life of the protector as about the same as that of the tire, and that the tire will last three times as long with them as when run bare, there is great economy in using them. Even though the average life of the protectors were no more than guaranteed—2,000 miles—they would not be expensive to use if one considers protection from punctures and skidding as of any value.

C. B. Woodworth, Newton Upper Falls, Mass.

ANTI-SLIP DEVICES

While anti-skidding devices are to be considered as necessary at all times of the year, during the winter and spring, when there is almost constantly moisture on the roads and paving, self-protection dictates that the tires shall be shod with anti-skids that will be positive in action and resist effectually the tendency of any vehicle to slide on any wetted surface or while in mud. Of course, with snow and ice the danger is considerably increased, and in the traffic of the city, even with the engine running very slowly, control is essential to safety. All experienced motorists recognize the danger of this sudden and unforeseen "skid," which often results in damage to the car and passing vehicles or foot passengers, and often injury or even death to its occupants.

The cause of skidding is obvious. When a vehicle moving in a certain line has its direction changed, the momentum obtained tends to continue the body in its former course, at a tangent to its changing direction, and this tendency prevails until it is overcome by the friction of the contact surfaces, and the vehicle as a whole progresses in its new course. The greater the weight and speed of the moving body, and its consequent increase of momentum, and the more slippery the surface traversed, the greater will naturally be the slip or "skid."

In the early days of the automobile, when the construction was light and the speed limited, this problem did not present itself with any force. But the increase in weight and speed of motor vehicles, and the consequent liability of skidding with its attendant dangers, made this feature a live issue in motorism.

To meet the emergency, all kinds of contrivances and devices have been suggested and employed. One of the earliest methods adopted was to wind the tires with hempen rope; but this at best was only a makeshift, and the perishable nature of the covering quickly placed it in the class of the impossible. Coil chain was next substituted in like manner, but this material developed the insuperable objections of injury to tires and the marring of paint on rims and spokes.

Since these early efforts, the problem has been approached on practical and scientific lines, resulting in the production of numerous devices, most of which have had their short hour and been forgotten. Those now recognized as practical and efficient can be enumerated on the fingers of one hand.

For the purpose of consideration, anti-skids may be divided into two classes—detachable and non-detachable. Detachable non-skids comprise those which can be applied when conditions demand and removed when the need is past. Non-detachable are those which are made a component part of the tire or the attachment and removal of which is a business so difficult and tedious that they are in effect permanent appliances. Disregarding efficiency and service, detachable non-skids appear to have a distinct advantage, as their removal when not required is an important consideration from the standpoint of economy in wear and loss of power.

Of the permanent non-skids, among the most common are those formed by metal studs incorporated in the tread of the tire as a constituent part of the tire; others are made by facing the tread of the tire circumferentially with a leather band studded with rivets. A less form of the same type is the tire with rubber studs on the tread. This kind of non-skid is most generally used on the Continent, where many cities require the use of a non-skid at all times.

A non skid tire on a similar principle was constructed by moulding into the tread coils made of piano wire, permitting parts of the coil to project above the tread. Thus a rough tire face was presented to the road surface, and when the coils wore through a vast number of wire points succeeded to the coils.

Another type of non-skid consists of a metal-studded leather cover which fits completely over the tire, thus accomplishing the double purpose of a tire-protector and non-skid. While non-skids of this class are capable of being removed, the difficulty of their removal or attachment and the time required would exclude them from the detachables, in the strict interpretation of the term.

All the non-detachables described above have been elaborated in minor details, producing a large number of devices of similar construction. But the main features remain the same and are fairly typical of their kind.

There are several salient features of an ideal anti-skid. There is an obvious loss in the use of a device when conditions do not require it. For this reason permanent non-skids are at a distinct disadvantage as compared with the detachable type. Again, the ideal anti-skid must be effective in all weathers and under all conditions of road surface. In this respect it would seem that the average non-detachable type fails to meet all the requirements. While metal studs may afford a reasonable degree of traction and prevention of skidding on wet pavement, I believe that the consensus of opinion is that in mud or snow satisfactory service is not obtained from them.

For the above reasons the detachable type of non-skidding device would seem to come more closely to fulfilling the requirements under all conditions. Take, for example, the well-known tire chain. The attachment or removal of these chains is a matter of seconds only, which permits of easy and rapid appliance when even a sudden emergency demands, and an even quicker removal when conditions do not demand their use. Being flexible, they occupy only a small space in the tool-box, and can be carried as a part of the regular equipment of the car, ready for immediate use. Furthermore, experience has shown that they afford ample traction in mud or snow, and are efficient in preventing skidding under all conditions of road surface. A distinctive feature of this device is that it is loosely attached, so as to permit it to creep circumferentially over the tire, thus eliminating any possibility of injury to the tire, which would be certain if the chain were anchored so that the cross members always engaged the tire at the same point.

An anti-skidding medium of some sort has come to be recognized as a necessary accessory. A driver endowed with great skill and experience may to a certain extent minimize the possibility, but can not absolutely prevent the sudden and unforeseen "skid," which bears so many attendant dangers. As a matter of safety, as a relief to the strain on nerves and muscles, as a safeguard against damage and danger, the anti-skid is being more and more appreciated by those whose pleasure or business throws on them the responsibility of the safe guidance of the car with its occupants.

W. M. Wheeler, New York.

My machine (164) is too light for bad country roads, but is ideal for city. Its very lightness guarantees the minimum expense for tire, oil and gasoline. In exact tests I have ascertained that I get about nineteen miles out of one gallon of gasoline while using my machine in my daily work, which means slowing down at every street corner, and a stop practically within every mile. My total expenses for tires have been $16.50, retreading of two tires $14, patching of one, $2.50.

Hugo Ehrenfest, M.D., St. Louis.

THE AUTO IN WINTER AND THE COOLING PROBLEM

AUTOING AT 32 BELOW ZERO IN THE FAR NORTH

I am an auto enthusiast of the extreme degree. I deeply regret that my advent as a physician antedated the perfection of the auto by more than twenty years. I regard the auto as the ideal means of transportation for our profession. I can not understand how any physician, with reasonably good streets and roads can be willing or can even afford to be without one. It not only saves time in both city and country practice, but converts a tedious country call into a pleasure excursion. Of course, it has its limitations and will not do the impossible. Too much mud or snow put it out of commission for a time.

Eleven years ago I sold my horse and have since depended almost entirely on the auto (165). I would not willingly be without one for many times its cost or maintenance. Although North Dakota has a rigorous climate, I only laid up the machine three days last winter, and not at all so far this season. As an example of its capabilities is this: Last summer, in answer to a call from some thirty odd miles in the country, I left home at 5 p. m., saw the patient, had supper at a country hotel, and was home at 10 p. m., and the friend who accompanied me voted it a most agreeable outing. This trip was not made with a high-priced powerful roadster, but with a single cylinder runabout (103), costing but $600. The odometer showed sixty-nine miles for the trip. Compare this with the same trip by hay motor.

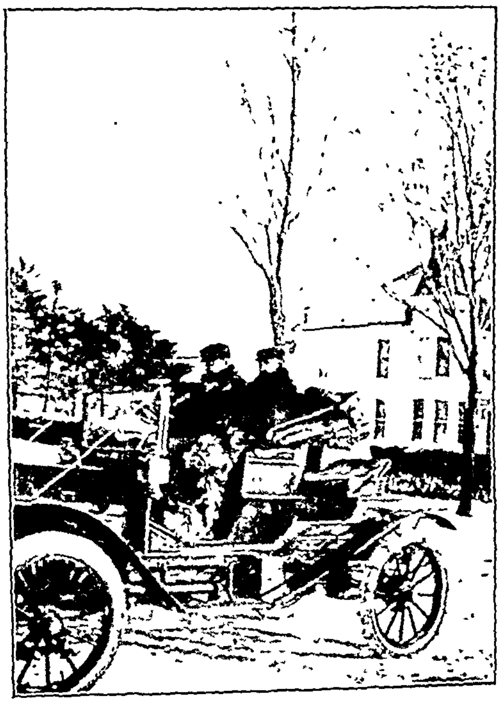

Fig. 32.—A winter ride with fur robes and anti-slip chains. Car (130) of Dr. George Kessel, Cresco, Iowa.

Last summer in Minneapolis I received a two-cylinder tour-[illegible]r (184) with a capacity for five passengers. I drove [illegible] old home in the southern part of the state, visited [illegible]ur days, and drove it to my North Dakota home, [illegible] friends with me. The odometer showed in that [illegible] and the only adjustment made was the cut-[illegible] lubricating oil-feed. It has since been an [illegible] evening drives. I have now ordered a [illegible] the same make and chassis with [illegible] good carrying capacity under the [illegible] of an ideal car for our use. [illegible] and a half-pint squirt-can [illegible]bination for cold weather [illegible] this will fail, and I have [illegible] gas-lighting tank and have [illegible] turn the gas into my intake [illegible], which always insures an explosion at the first throw. During our recent cold snap my car stood on the street from 1 to 6 p. m., with the thermometer at 32 below, and the engine was so stiff that I could hardly turn it over, but it was "off" at the first turn. Of course, the gas is used only for a few moments until the engine is warmed up.

H. M. Wheeler, M.D., *Grand Forks, N. D.*

CARE AND RUNNING OF AUTOMOBILES IN WINTER

There is little use trying to run an automobile in a country that has normally a considerable snowfall and cold weather, and, consequently, much bad roads. Although there are times when one could drive his machine with fair comfort in the winter season, it would be at his peril and at the peril of his machine. Weather, hot or cold, however, makes no difference in the running of an automobile in itself. The difference is in the condition of the roads, the comfort of the driver, the wear and tear on the machine. Contrary to my preconceived notion, I find that frosty and icy roads are not as injurious to tires as the hot dry roads of summer.

The only thing that needs special attention in cold weather is the water in the cooling system. Eternal vigilance is the price of safety here. I am one of the many who have paid the price to learn this lesson. Now I commence early, before cold weather, the use of an anti-freezing mixture composed of one gallon of denatured alcohol and four gallons of water. The strength of this solution is increased, as the cold weather increases, to one gallon of alcohol and two of water. This proportion is sufficient to resist any weather in which any man would care to drive. Formerly I used a solution of calcium chlorid, which is excellent, but I am sure that it is injurious to the metal of the radiator and engine. One thing to remember about this mixture is, always to be sure that the proportion of the ingredients used is kept at the same percentage, especially the alcohol mixture. Alcohol, being of lighter specific gravity, will evaporate before the water. Therefore, alcohol must be added to the old mixture from time to time to keep up the proper strength. This must always be done if the water has been overheated during a hard day's run.

Every beginner will soon learn that an engine that has stood over night in the cold is very hard to start in the morning. A little trick that will make a wonderful saving of muscle and temper is to take any piece of clean, soft cloth or sponge, soak it in gasoline and hold it to the air intake of the carburetor. You will be surprised how quickly the engine will be running at full speed.

So now I think that the best place for my automobile (130), in this changeable and often inclement climate of northern Iowa, is in a snug corner of a good, dry machine shed from January 1 to April 1. Put it in on four solid blocks and take off the tires and lay them away in a warm, dry place. In the meantime, polish off the rims of the wheels thoroughly and give them a coat of shellac. This will make them smooth and free from rust, so that they will not injure the tires when they are replaced in the spring. If you are not sure that you can drain every drop of water from the radiator, remove it and let it keep company with the tires in the same warm, dry place. In the spring test it under pressure, and if any leak is found, send it to the factory for repairs, or buy a new one. It will be cheaper than to have a tinsmith or the man in the so-called automobile shop try to repair it. This lesson I have also learned, and for this also I have paid the price.

One more thing there is to be remembered: Along with the coming of the automobile there has come a horde of pretenders who call themselves automobile repairers, whose chief asset is the large sign hanging from a small shop far out into the street, "Automobiles Repaired." If you should have a leaky spark-plug weakening the power of your engine, and should drive your machine into one of these shops, five times out of six the man under the sign would persuade you that the engine was "busted," or put in "wrong end to," and would immediately proceed to give the manufacturer a lesson in automobile building. The procedure usually lasts three to five days at 50 cents per hour, by which time you would also have a lesson. This lesson one learns sooner or later, unless one is willing to take somebody else's advice, viz.: To take one's machine only to the fellow who has had actual training and experience in an automobile factory. Anyway, always remember the aphorism of Josh Billings, "It's better not to know so much than to know so many things that ain't so." This may hit the writer of this article, but that can't be helped.

George Kessel, M.D., Cresco, Iowa.

WATER COOLING VS. AIR COOLING

Over 90 per cent. of automobiles manufactured are of the water-cooled type. The majority of people seem to have unjustified prejudice against the air-cooled type, due to the failure of the first air-cooled machines, a considerable number of which were marketed throughout the country, and so strong has this prejudice become that the later air-cooled cars have been given but slight attention in spite of their very successful performances.

Recent endurance contests have shown that air-cooling is not only successful but that air-cooled cars will stand more low gear work—such as running through deep sand and mud without distress from overheating—than the water-cooled cars.

Advocates of the air-cooled motor assert that it is an indisputable fact that the air-cooled motor is more efficient than the water-cooled type. The only successful cylinder design for the air-cooled motor is the type with both valves in the head and any engineer will admit that this location of the valves gives the highest efficiency in any motor, but there is another reason for the higher efficiency of the air-cooled motor, namely, the higher working temperatures of the cylinder walls.

The hotter the cylinder walls can be kept without destroying the lubrication the more efficient the motor. As the temperature of the water in the jacket of a water-cooled motor must be below 212 degrees F. to avoid boiling it will be readily seen that the cylinder walls of a water-cooled motor must be kept at a much lower temperature than is required to protect the lubrication, which of course is a loss in efficiency. Almost all of the good cylinder oils on the market to-day will stand a temperature of 400 degrees F. without distress.

It has been proved by actual test that the air-cooled motor will give from 10 to 15 per cent. more mileage on the same amount of fuel than the water-cooled motor.

In the hands of the novice, the water-cooled motor will give the better satisfaction as it will stand more abuse and is not so sensitive to adjustments as the air-cooled, yet those who have driven a good air-cooled car and become familiar with it favor it very much and could not be induced to exchange for the water-cooled type with its many additional complications.

It would seem that the high-grade air-cooled runabout would be the ideal car for the physician's use, as he would have no worry from freezing in cold weather, no leaky water pipes or radiator troubles, and the operating expenses would be less.

The water-cooled motor should be quieter than the air-cooled from the very nature of its construction, i. e., the jacket of water surrounding the cylinders and valve pockets forms a deadening cushion for the noises developed by the moving parts and especially by the seating of the valves, yet many well-known water-cooled motors are more noisy than the best air-cooled ones.

The trend of automobile design is toward simplicity and here the air-cooled motor excels on account of its minimum complications.

In my opinion the future automobile motor will be air-cooled, using alcohol as a fuel.

A. N. Manross, New Britain, Conn.

DELIVERS THE DOCTOR FROM SLAVERY

I read the past automobile numbers of The Journal with much interest and although I had a somewhat disastrous experience with a second-hand machine (134) in 1905 and 1906, the articles printed influenced me to try it again.

I bought a gasoline runabout (135), March 25, 1908, and ran it practically continuously from then until Jan. 1, 1909, registering 5,718 miles. During this time I used horses only eight times. A summary of my experience is as follows: I used 310 gallons of gasoline for power and cleaning, 25 gallons of lubricating oil, 4 cans of transmission oil, a part of a can of hard oil, and three new tires, which are almost unmarked as yet. I spent 60 cents for new parts which the blacksmith could not make; about $10 for blacksmith and outside help; $3.75 for charging the storage battery, and $7.40 for dry cells. I look my machine over very carefully at least once a week, and oftener if running up big mileage. I have never broken down, failed to make my trip on time, or been delayed over twenty minutes on the road.

I consider that my automobile has been a great success, due in the first place to good construction, and in the second place to the careful watch kept over adjustments, loose parts, and mainly, lubrication. The auto has changed the drudgery of my drives into pleasure and has extracted the sting of night drives. I get back in time to have a good sleep, whereas, with horses, the whole night would be gone.

It cuts the bonds of the country physician, allowing him to refresh himself with a visit to professional brothers in neighboring towns without neglecting business, as an hour or less will get him back home on a telephone call. In a region of good roads the automobile is the only logical mode of transportation, for economical reasons as well as pleasure. All hail the automobile as the deliverer of the doctor from slavery.

H. S. Willson, M.D., Crystal, N. Dak.

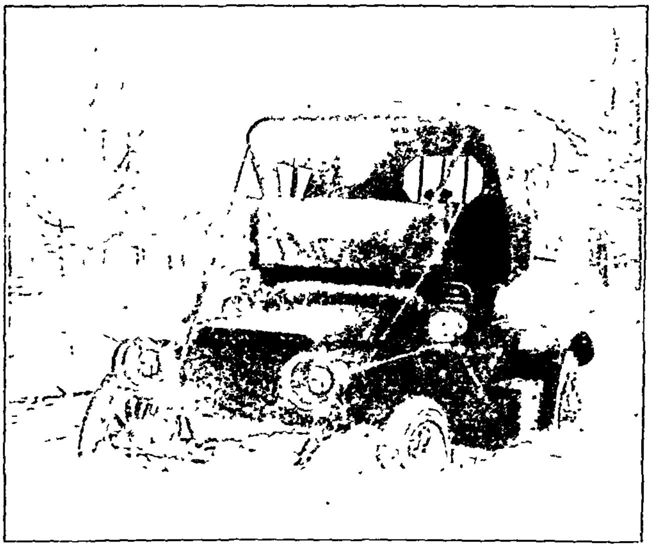

Fig 33.—Bucking a snowdrift.

I have been running every day for three months a two-cylinder runabout (169) and "it's all to the good." The material, construction and workmanship are substantial and reliable. For the price, $750, I consider it the best automobile value I have seen and an ideal doctor's car. Its cost of maintenance is very little, if at all, more than that of a horse. I keep it in a large garage under the constant supervision of skilled mechanics and engineers. Its appearance also has been greatly admired by every one. But, of course, it is an automobile, and in common with all machines demands constant, intelligent care and vigilance with its hundred and one little details and points to be kept in order to avoid embarrassment and delay. Still, it is so vastly superior to horses that it pays to do it.

Jonathan T. McDonald, M.D., Honolulu, Hawaii.

THE MANUFACTURERS' CHARGES FOR REPAIR PARTS

CHEAPER REPAIRS—THE FOREMOST NEED

At the risk of being thought pessimistic, I am going to assume the rôle of fault-finder. The commercial relations between the *automobile manufacturer and the consumer could* be improved, I think, in many ways in the interests of both, especially the latter. Consider the chief items of expense in the maintenance of a car; tires, accessories and new parts that are frequently required to replace worn-out or broken ones. These expenditures may be classed as incidentals, but the constant drain on one's income decides the true position of the machine in reference to the physician.

I have never purchased a new part for a gear or an engine that did not cost nearly twice as much as the same article could be made for at any good machine shop, if such a shop was only accessible. New parts for the best foreign cars cost about 60 per cent. of the charges for the same parts belonging to domestic cars. In this respect American manufacturers have not kept good faith with the public.

If prospective purchasers would always insist on a price list of the separate parts of a car, together with the descriptive circular of the machine, I am sure many makers would greatly modify their lists and help in a measure to right this evil. The same may be said of the cost of accessories—anything for an auto, it seems, must have an unreasonable value. A casting for a stove will cost 30 cents, while practically the same thing for an automobile must cost $6 or $8. The people know these things and resent the injustice, but as yet are powerless to prevent it. The organization of automobile clubs, which promised great things, has made a failure of this entirely.

This is easy to understand, because they are controlled by the producers. The same may be said of the auto journals. There is not an automobile paper published to-day that is not printed entirely in the interests of the dealers. It seems to me that this suggests the solution of the problem.

It has often occurred to me that we have the opportunity to assist ourselves in a united defense against this, which is practically the only, menace to the automobile consumer. For instance, a new instrument, which is perhaps only a slight modification of one used for fifty years, and no better, will receive a long description in medical journals; similarly, a new preparation of a drug, which is more palatable, finds ready notice. There is no instrument or class of drugs that can compare with the automobile in the service rendered sick people, yet we have to wait a year or perhaps two to have *something published in the interest of the* users of the automobile.

I have often thought that an automobile department of The Journal of the American Medical Association, with a competent editor, would be the most valuable adjunct to The Journal we have ever had. We need not stop at this. A subsidiary society could be formed with yearly dues of perhaps $5 for membership, which would control the largest supply house in Chicago, with branches in New York, Philadelphia, San Francisco and other places, where its members could obtain supplies at nearly wholesale rates. This sounds like a "pipe dream," but it is not; it is intensely practical. With a membership of 50,000, with perhaps 20,000 using machines, and many more wanting to use them, all that is lacking is the organization.

Let a pharmaceutical house abuse its privileges with the profession and see how quickly it will be called to an accounting *by medical journals. Why should this class of* producers enjoy so great immunity?

A local board of directors elected or appointed could easily manage affairs, and great possibilities are open.

Many high-grade manufacturers would be glad to cater to such a market. It is estimated that at least 40 per cent. of the proceeds of manufactured products go for agents' commissions and advertising. If a consumers' organization took charge of the manufactured products it would mean that we could buy a $1,500 car for $1,000. Two or three types of cars could be decided on as most fitting a physician's use. Say a small runabout, a larger car with roadster or touring body, and one of the limousine type. If one is in doubt as to the market, advertise a few new high-grade cars at two-thirds of the market valuation, and see how long it will take to dispose of them.

Of course, it would take some time to elaborate this on such an extensive scale, but there is no doubt that we will eventually require some organized body within the automobile consumers.

W. W. Beveridge, M.D., Asbury Park, N. J. (197).

THE PERFECTED TWO-CYCLE ENGINE

TWO-CYCLE AS COMPARED TO FOUR-CYCLE

The primary requisite in an automobile engine for pleasure cars is ability to give the smoothest possible running to the car at all speeds and road conditions, with the minimum of noise and vibration and the *maximum* of power; and to this requirement for an engine for commercial use may be added reliability, low maintenance and durability.

The smooth running can be obtained satisfactorily by many light impulses in a four-cycle engine only when built with six cylinders and, in a moderate degree, for light cars and low horse-power engine with four cylinders. Experience has shown that the life of every part of the mechanism of a car, including tires, is greatly prolonged by a multiplicity of light engine impulses which gives an even unbroken application of power.

In all four-cycle engines an impulse is imparted to each piston only at every second revolution of the crank-shaft. This gives one stroke which absorbs power instead of imparting it and requires the multiplicity of poppet valves and their complicated mechanism necessary for their timing and operation. The noise of the four-cycle engine is caused by the pounding of the valves, the rocker arms, the cams and the loose bearings.

Even in the best types of four-cycle engines these parts are always noisy and unsatisfactory, with great liability of leak*ing, sticking, breaking and of improper timing,* and in all four-cycle engines are subject to rapid deterioration due to their working under intense heat. Engine troubles are largely due to the lack of adjustment and condition of these parts and the renewal of them is largely responsible for the high *maintenance cost of the ordinary four-cycle engine.*

The principal advantage of a two-cycle engine over a four-cycle engine is its ability to give the necessary power impulses with one-half the number of cylinders. In a two-cycle engine an impulse is imparted to each piston at every *revolution of the crank-shaft* and this is accomplished without the employment of any valves and their accompanying complicated mechanism.

In the past practically all two-cycle engines for automobiles have been adaptations of the old-fashioned marine or stationary engines with their crude and imperfect principles and construction and two-cycle engines are often condemned in general terms by those ignorant of the perfected two-cycle engines used to-day in automobiles which engines have been designed, developed and perfected solely for automobile use.

There are two types of two-cycle automobile engines, known as the three-port and two-port systems, in both of which the charge is taken into the crank-case and then transferred by pressure to the explosion chamber instead of being sucked directly into the explosion chamber, as in the case of the four-cycle engines.

The three-port system is a development of the old-style marine or stationary engine adapted to automobiles. In it the carburetor connects with the crank-case through a port which is opened and closed by the piston at the end of the stroke—the suction stroke being completed and the maximum vacuum formed with no carburetor connection—the port at this point is opened and the charge rushes in.

Engines of the two-port system were designed originally for automobiles. In this system the carburetor is connected direct with the crank-case and the suction acts on it during the entire up-stroke of the piston, giving the same action on the carburetor as in a multiple-cylinder four-cycle engine. The crank-case compression of the charge in both systems is made by the down-stroke of the piston and the pressure in the three-port system is usually about three pounds while in the two-port system it is from eight pounds up, varying with different manufacturers.

The greater compression gives a more positive transfer of the charge and less mixing of the old and new charges, giving greater efficiency and allowing of a wider variation of engine speed so necessary for a perfect running automobile engine.

The two-cycle engine, receiving an impulse with every upward stroke of the piston, gives the necessary multiple impulses to obtain the smooth running with one-half the number of cylinders—is absolutely quiet, all valves, rocker arms, cams, etc., being eliminated and has a maximum amount of power with minimum of weight and space occupied.

A perfected two-cycle engine is practically indestructible, as the only wearing parts are the pistons, rings and cylinders and, with the offset crank-shaft, the wear on these is extremely light.

Experience has shown that the depreciation of a four-cycle engine is in excess of 25 per cent. per year while judging by the facts obtainable on the perfected two-cycle engine the depreciation is reduced to the remarkably low rate of 5 per cent. per year.

Other advantages of the two-cycle engine over the four-cycle are the absence of valves or chambers opening into the combustion chamber with their exposed surfaces, which absorb the heat and pressure from the charge and materially decrease the efficiency of the four-cycle engine; also the absence of carbonization of the two-cycle, there being no carbonization except at the exhaust ports which are easily cleaned.

When spark and carburetor are properly adjusted the two-cycle engine will run without missing at a much slower speed than any other type of engine and will outspeed any other type, being capable of over 2,500 revolutions a minute, giving maximum flexibility and variable car speed on high gear.

It is not as easily stalled at low speeds as a four-cycle engine, as the transfer of the charge into the cylinders and around the igniter plug is as positive at lowest speed as it is at higher speed—in fact, the engine speed has no effect on the velocity of the charge to the cylinder as it does in a four-cycle engine.

Extreme simplicity, lack of adjustable parts, low compression and ease of cranking make it an easy engine for a woman or person of little experience to handle.

The desirable features of a good four-cycle engine are possessed by a good two-cycle engine in an equal or greater degree.

The relative merits of the two-cycle and four-cycle engines may be summed up as follows:

AUTOMOBILE ENGINES

	TWO-CYCLE	FOUR-CYCLE
Cylinders	One cylinder does the work of two four-cycle cylinders.	Six cylinders necessary to give the smoothest running.
Space and Weight	Gives maximum power for space and weight. Absolutely essential for taxi-cabs.	Requires twice the cylinders, practically twice the weight and space for same power as a two-cycle engine.
Power Strokes	Piston receives impulse with each up stroke	Piston receives impulse every second stroke, giving a useless stroke which absorbs power instead of imparting it.
Poppet Valves	Has none	Has a mass of them, number depending on the type and manufacture.
Valve Grinding	None	Semi-monthly after a few thousand miles' running.
Valve Shafts, Adjustable Bearings, Cams, Springs, Rocker Shafts, Etc.	Has none	Inherent to the four-cycle engine and necessary to set and time the valves properly. Noisy, leaking, sticking, breaking, improper timing and rapid deterioration due to excess of heat.
Noise	Has no outside moving parts; hence the quietest engine built.	The noise of the four-cycle caused by valve pounding, rocker arms and cams.
Starting	Low compression. Easy starting.	High compression. Hard cranking.
Flexibility	Can be throttled lower than any other type of engine without missing. Engine speeds also fastest.	To obtain low car speeds, change gears resorted to. High speed of car dependent on large cylinders.
Simplicity	Five moving parts.	Eighty to 120 moving parts.
Reliability	Absence of parts. No adjustments necessary or possible.	Multiplicity of parts. Always requiring attention.
Maintenance	Minimum. Engine parts replacements unknown.	Maximum. Replacements constant. The expense cumulative, increasing rapidly in proportion to number of miles run.
Indestructibility	Practically indestructible. Depreciation not 5 per cent. per year.	Rapid deterioration. Experience showing 25 per cent. depreciation per year.

Walter G. Morse, Springfield, Mass.

THE PHYSICIAN'S SOLILOQUY

To buy or not to buy, that is the question.
Whether 'tis safer with a horse and buggy
To dodge the autos that infest our highways,
Or to provide oneself with one's own auto
And keep the others dodging. To ride—to scorch—
No joke—if by a scorch we think we end
The currying and the thousand daily chores
The driver's heir to. 'Tis a consummation
Devoutly to be wished. To ride, to glide;
To glide; perchance to bump; ay, there's the rub,
For in that fatal bump what aches may come
Ere we have shuffled off this mortal tire
Must give us pause. There's the respect
That makes calamity of so long rides;
For who would bear the toots that rend our ears,
The scorcher's jeers; the autoist's recklessness,
The stench of gasoline, the clouds of dust,
The insolence of chauffeur as he spurts
His fiendish engine at unlawful speed,
When he himself might his quietus make
With bursted tire? Who would not goggles wear,
Rather than dodge a buggy in and out
In dread of scorching car? The task to find
That undiscovered country in whose bourne
No screeching auto runs—puzzles us all.

John B. Todd, M.D., Syracuse, N. Y.

DO NOT EXPECT TOO MUCH OF YOUR CAR

A SOBER SURVEY OF PROBABILITIES

For the past four years, I have been using automobiles in my practice and have kept an accurate account of every dollar spent, every gallon of oil and gasoline used and every mile covered. It has been a rather expensive experience. Do not be fooled by interested parties, who assert that you can run thousands of miles, on a few dollars, without repairs, at the rate of twenty-five miles to a gallon of gasoline and such other rot. Experiences of this sort are exceptional and must not be taken as the rule.

My first venture was a second-hand runabout (111) of the vintage of 1903, a veritable nightmare. This car I used twenty-one months at a cost of $850. For this I received only 6,000 miles, about 15 cents per mile. The trouble with that car was inaccessibility of parts. Every time anything broke or needed replacing in the engine or transmission, the body had to come off. This happened nearly every month, so a repair bill of $50 was common. I finally sold it. No more single-cylinders under the body for me.

My second and present car is a four-cylinder runabout (112). This car has cost, with equipment, $1,450, for nineteen months, $1,100 for the car and accessories and $350 running expenses; for this I have receivea 7,500 miles. Counting its present value $600, it has cost 12 cents per mile. The running expense per month was about $10 for gasoline, oil and batteries, $5 for tires and $3 for repairs, etc. This next season the repair bill will be greater, as all parts broken will have to be paid for, the guaranty having now expired. The depreciation, however, will be much less. This car averages fourteen miles to a gallon of gasoline.

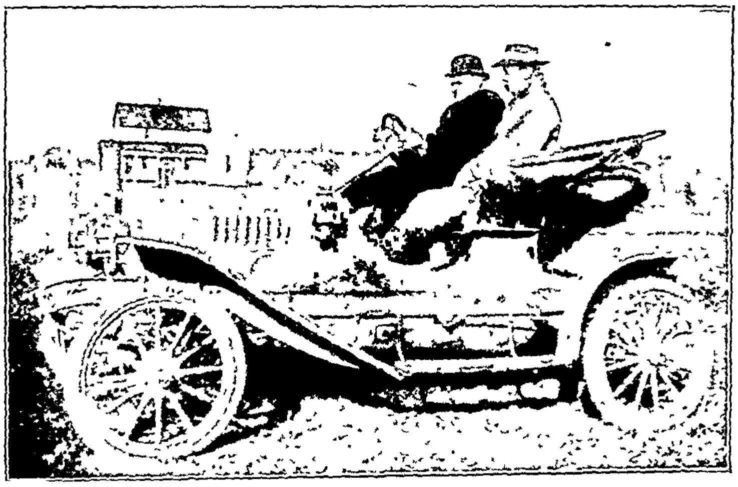

Fig. 34.—Dr. A. H. Calhoun, Wren, Ohio, at the wheel. His article is on page 817. (Auto 110.)

Do not pay a big price for a car. Even at the reduced price for accessories, $200, besides the cost of the car, will hardly buy what is needed. By the end of one year the outfit will bring only 50 per cent. of its cost. The best plan is to run it two or three years, then sell and get the latest improvements. Almost any car will last three seasons, and the expensive car will bring very little by then. The ideal car for a city doctor should have four cylinders, solid tires, short-wheel base and a big powerful engine. Four cylinders are needed to give power; a short wheel base is so much easier to handle and turn and an engine giving one horse-power to fifty pounds' weight is not too much in power.

A big engine does not have to be cleaned out or have valves ground so often, and if it is developing only one-half its power, it would still do as well as many of the present cars. Do not worry about the extra gasoline and oil used; that is only a small matter. Many times on a muddy road or steep hill, or when running through snow, you would give a five-dollar bill for more power. Cars should not weigh more than 1,200 pounds, so that they can be easily pushed, and also to keep down tire expense.

The air-cooled engine is a great thing. The trouble with the present air-cooled cars is that the engine is too weak. On a long hill it loses power from the overheating. If the air-cooled engine was more powerful for the load carried, it could lose some of its power on hills without falling behind. I notice one company has the right idea: a twenty-four horse-power. air-cooled motor for 1,200 pounds of car (113).

In buying an automobile, look out for a light car, big engine, air-cooled, magneto, a large, roomy, one-piece seat, room for three, dashboard adjustable, carburetor with priming device, folding hood, hooded dash to protect the coil from rain, full elliptical springs (single ones will break), a hand-brake which will lock the rear wheels, a long running board and a fully protected body and engine.

Do not give up your horse for two or three years yet, unless you have fair roads, are near to a good repair shop, or are mechanically inclined and do not mind soiling your hands and linen.

Frederick Yates, M.D.,
Washington, D. C.

THE IMPORTANCE OF BATTERIES

I first bought a high-wheeled air-cooled automobile (149). My experience was disastrous and every mile that I ran cost me one dollar. After disposing of this machine I bought a four-cylinder runabout (150) with an engine rated at fifteen to eighteen horse-power. The summer of 1908 was exceptionally wet and when the roads were not in condition of bottomless mud they were so rough that my pneumatic tires were unfit for further use without protection or retreading at the end of my first 500 miles.

I was discouraged and plainly saw myself bankrupt if I tried to use pneumatic tires under these conditions. With but little faith in their efficiency I sent for tire-protectors (151). These I put on over my worn-out tires and have used them without tire trouble since. In fact, the old tires have never been deflated. The crimped wire spring of these protectors keeps the protector tight and always in place. I have used these for the roughest kind of work and they show practically no wear.

Even after solving the tire question I expected more or less trouble with my machine. In this I have been happily disappointed. I learned early that to keep my machine running smoothly I must always have a strong, well-charged battery. This was of vital importance; before learning this I condemned my auto for many things for which it was not responsible.

With a strong battery, circulating water, and with plenty of oil and gasoline in my tanks I really had no trouble.

I broke a front spring one night while on a hurry-up call, but this is the only break that I had during the year, and not one day was I laid up for repairs.

My operating cost, covering everything, was less than $50 for over 2,000 miles that I ran it. It could have been much less, but I had a gasoline leak that I was unable to control and I used one-third more gasoline than I should have used. I have run fifteen miles to the gallon, but my average for the season was about ten miles.

My battery consumption was heavy, also, and expensive, as I was always obliged to send my storage battery away for recharging and so had express charges both ways.

A set of dry cells would not run my four-cylinder engine a day, and my storage battery ran it on an average about 500 miles.

I think if I were to buy a new machine to-day I would consider the factor of battery consumption, which is so heavy in a four-cylinder machine, and select one of only two cylinders. In fact, from my observation, I believe that a powerful two-cylinder engine gives better results than an engine with four small cylinders.

There were several things that I learned, among which were the following:

1. An automobile is no good in mud or snow.

2. Most automobiles are rated too high as to power. Only under the best conditions could I get the power from my engine that I had reason to expect.

3. A standard make machine is as nearly perfect as any mechanical device can be. Repair bills and engine troubles were not among my experiences.

4. An automobile is a practical time-saving affair under any half-way decent road conditions.

Mine has been a pleasant experience, and, although I am not wholly satisfied with the machine that I now have, in all of my use of it it has always been ready to go, and now it is in about as good condition for its second season as when new.

The time saved with an automobile to a busy man is a great factor, and the pleasure which one has in using a good machine cannot be measured.

To a prospective buyer I would say, Do not experiment, but buy a standard time-tested machine. Buy a machine with a powerful engine. Do not try air-cooled engines and friction drives until they prove better than they have to date. I have come to a definite conclusion as to the machine (152) which I would buy if I were to get a new one now.

Automobiles are practical, and if one has a standard machine the cost for up-keep and repairs will be very low and when it is not in use is of no expense to the owner.

My running expense was about 2½ cents per mile. This is much higher than I would expect in a two-cylinder machine.

MERTON FIELD, M.D., Minnesota Lake, Minn.

IN FAVOR OF A LARGE HEAVY CAR

The practical car will be sufficiently large and heavy to enable the driver to maintain a steady position in the road when a moderate speed—for instance, twenty-five to thirty miles* per hour—is desired. This can not be done with a small car, lightly constructed and with short wheel base. I should place the minimum weight at 1,800 pounds, maximum 2,500 pounds, minimum wheel base 100 inches.

The motor should be at least twenty-five, and need not exceed thirty-five horse-power, as each increasing horse-power above the necessary, increases proportionately the amount of fuel consumed in operation.

The ease with which a car is operated depends on its flexibility, that is, the ability of the operator to increase or decrease the speed sufficiently for most driving purposes, without changing gear. This depends mainly on the transmission, which should be of the selective sliding gear type. The clutch also is an important factor. When of the multiple disc type it requires no adjusting, and when run in a bath of oil it will not wear out. Three speeds forward and reverse are important, making it unnecessary to race the motor in order to pass from low to high speed in starting the car.

Very little need be said regarding the construction of the car, apart from the advisability of simplicity of design and strength of individual parts.

Mere extravagance in automobile buying is a thing of the past. The physician does not care to pay more for a car than is really necessary to secure service, speed, hill-climbing ability, comfort and endurance. Neither can he afford to waste money on a cheap and unreliable car that will bring him only trouble and lack of confidence in cars in general. One can get a car such as described in the foregoing, well-equipped, for from $1,500 to $2,000. An attempt to purchase a car for constant service at much less, at the present prices of cars, will be at the expense of troubles and monthly garage bills. If you pay more than this you simply do not get any additional returns for the extra money.

The physician who has a good car and any mechanical ability at all, can drive and care for his own car, get a great deal of pleasure and recreation at a small expense and with a small expenditure of time, saving almost the first cost of the car in a year's time, not to mention the three or four hours gained each day for business that would be spent driving a horse and buggy to accomplish the same amount of work. The item of time alone for the busy physician will more than pay for the car during its life.

I have driven my present automobile (119) exclusively in my practice, giving it constant daily service in all kinds of weather, mud, snow and frozen roads for four months, having covered almost 5,000 miles during this time, at a total expense of operation of $47.62.

F. W. SHELTON, M.D., Independence, Kan.

CHOOSE MACHINE ACCORDING TO THE WORK IT MUST DO

The first automobile number of THE JOURNAL helped me to become infected with the auto fever, and for a whole month I utilized my spare time in studying a high-wheeled catalogue. A salesman, however, talked me into buying a runabout (148), whose only disadvantage, I find, is occasionally a difficulty of cranking. With my two years' experience in running this auto I feel pleased that I did not invest in the high-wheeled machine.

I am sometimes asked by a physician as to my preference for low or high power. Well, that depends on the roads to be traveled. West, south and north of me is level country, over which my ten horse-power machine can travel about as fast as the strongest and dearest—at any rate, as fast as I want to go—and with less expense to tires and machinery on account of its lightness. East of me, however, is hilly country, over which I can make as good speed with the horse as with the automobile and at less expense and with more assurance of getting there and back. My runabout is a good hill climber, but it must climb nearly always on slow speed. Hence, if a man has level country about him and good roads a light one-cylinder, low-priced runabout is equal to the task, but if he has hills, or even undulating country, he will always meet trouble unless he has at least fourteen or eighteen horse-power, and that means two or more cylinders. The method of propulsion must likewise be considered. A chain-driven requires a lower horse-power than a shaft-driven machine.

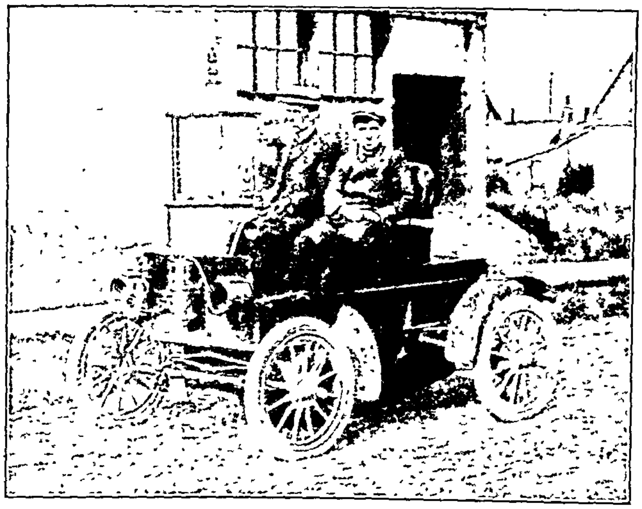

Fig. 35.—Dr. Daniel Conboy, Bad Axe, Mich., in his golden-wheeled chariot (148).

Tires cost comparatively very little in original expense and in up-keep in a runabout. In a touring or large car rubber expenses run high. After two years' use my machine is yet good, and I think I can run it three years more by not abusing it. The average life of this machine, I find by observation of other possessors of the same vehicle, is about five years. I have never been hauled home, but have pulled a large car and its load apparently without difficulty, but, of course, at slow speed.

DANIEL CONBOY, M.D., Bad Axe, Mich.

AUTOMOBILE EDITOR'S NOTE:—If our friend gets "pinched," will he dare tell the judge he thinks thirty miles is a moderate speed?

SOME PRACTICAL SUGGESTIONS ON TIRES AND ENGINES

SOLID TIRES AND SPRINGS

While pneumatic tires have been improved at least a third and have been reduced in price 20 per cent., still the greatest of all objections encountered by the physician who does country practice with an automobile comes from failure of pneumatic tires to hold air. Nothing is more exasperating. When a delay due to a flat tire has once been experienced, the dread of it in the future transforms pleasant anticipation of a trip into anxiety and fear of trouble.

To me it is absolutely unbearable. Therefore I have had solid rubber tires put on my wheels and spiral supplementary springs placed at the ends of my elliptic automobile springs. The increased resiliency afforded by the altered springs makes up for the difference between pneumatic tires and solid tires, and the net result is that I have entirely eliminated tire troubles, with all the worry and forebodings of disaster which pneumatic tires carry with them.

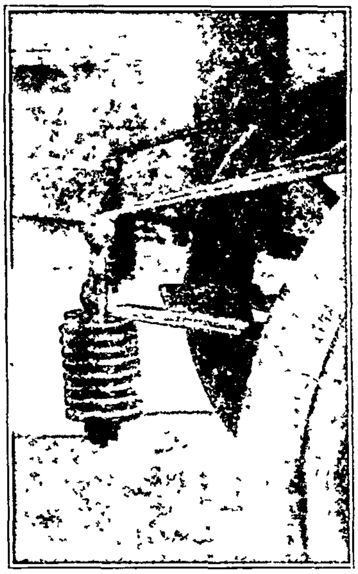

Fig. 36.—Solid tires and coil springs, described by Dr. Hard, to secure resiliency without pneumatics.

Improvements in construction have produced dependable products during the past year which make the self-propelled vehicle more useful to the physician than ever before. A uniform standard is gradually being approached by all manufacturers, a composite of the good features which have stood the rigid test of time and varied conditions, and now the physician who wishes to secure the ideal advantages of quick transportation to and from his patient's bedside can use the automobile with much more satisfactory results than heretofore. The single-cylinder motor, which is compelled to store up propelling force from one explosion to another by means of a cumbersome flywheel, is almost extinct. The two-cylinder horizontal engine, which is a compromise between the evils of the single cylinder and the steady pull of the ideal engine, is also going out of use. Six cylinders seem to be an extreme not to be desired, and the happy mean seems to be the four-cylinder motor with its power impulse every half-revolution of the crank-shaft, which has proved so effective in steam-engine design. The upright cylinder affords important mechanical advantages which add to the efficacy of the four-cylinder engine. The pistons move in a path opposite to the progress of the car, that is, vertical piston movement with horizontal car movement, and this corresponds better with undisturbed power application. The pistons wear more evenly, the lubrication is more positive, the piston rings remain in more correct relation to compression, and accessibility for observation and adjustment of the motor is favored. In order to secure sufficient power the cylinder in a four-cylinder motor need not be so large that back-kicking of the starting crank will be a menace to any extent. The motor starts more easily, applies the power more continuously, admits of greater range of speed control, and weighs less per horse-power than the motor of fewer cylinders. Therefore, the four-cylinder engine is fast coming into more general use, and is the best form of explosive engine for use in a doctor's automobile.

The desire on the part of automobile designers to make the vehicle cling close to the ground has resulted in lack of road clearance between the wheels, which is a great source of worry and trouble for those who use country roads. Nine inches is the average clearance of an automobile of the low-wheel construction. A boulder the size of a man's head concealed in the grass that is usually found in the center of the country road, added to the rut depression on the sides, will strike the gear housing of the rear axle and destroy the car. This is the worst fault of automobile designers to be found in the standard automobiles of to-day.

My eleven years' experience in driving an automobile in country practice has led me to adopt somewhere near the following features: four-cylinder, four-cycle, water-cooled motor, with seats for only two, low protecting top, supplemental spiral springs, solid rubber tires, plenty of good lamps (tank supply), side chain drive in order to get good road clearance in the middle, positive mechanical force-feed lubrication, storage and dry cells ignition, glass folding wind shield, speedometer and odometer, and a weight for the entire car of not over twelve hundred pounds.

A. D. Hard, M.D., Marshall, Minn.

A SYSTEMATIC PRESENTATION

During the past five years the marvelous development of the automobile has resulted in a much more satisfactory and serviceable car. Its use among the medical profession has increased to an enormous extent, chiefly for this reason.

A good serviceable car adapted for the use of a physician can be purchased to-day for almost one-half the price of five years ago.

Type of Car Desired.—Practically all the 1909 models of the reputable makes have four-cylinder engine with shaft drive and magneto ignition, and one can purchase cars of various sizes and horse-power according to the use he desires of it.

For the general practitioner who desires reliable service the runabout or small touring car is the most desirable, with from fourteen to thirty horse-power rating. The touring-car type with two seats is often of great value when you desire to carry more than two people, and the extra seat adds but little to the cost of the car. A four-cylinder shaft drive with long wheel base (at least 90 inches) gives smoother action and more comfort in riding.

Gasoline.—Only the best grade of gasoline should be used, as the cheaper grades carbonize the spark plugs more readily, and, by containing a larger percentage of water, often cause the motor to run irregularly.

Oils.—Lubrication is of the greatest importance and it will be soon learned by the beginner that a few cents saved on oil will result in a few dollars' wear on the machinery and bearings. Only good grades of oil should be used.

Ignition.—The most economical is the magneto, and almost all 1909 models possess this equipment. In cities storage batteries are satisfactory and comparatively inexpensive, but in the country districts where recharging causes considerable delay, the old method of using dry cells is essential, although decidedly more expensive.

Spark Plugs.—It is impossible to state that any particular make of plug is the best, as certain makes appear to give the best results in certain motors. This every one learns by experience, as every car is to a certain extent a law unto itself; but one fact remains: that the best spark plugs are those with the platinum tips, as they do not carbonize, hence do not require frequent cleaning as do those with steel contacts

Tires.—The most expensive part of the maintenance is tires and usually the most common cause of delay, as punctures will occur and usually at the most inopportune time. This is a problem of great value to the physician as a delay of this kind may mean a life lost. To obviate this I have tried all the various protectors and devices to prevent punctures, and during the past year I have not had a single puncture. My experience with solid and cushion tires has been unsatisfactory. They are hard on the machinery, jolting the car and breaking axles, which cost more than tires. The leather-covered protectors with steel discs to prevent skidding have proved the most satisfactory, and, if properly adjusted, the tire proper has but little wear, so that you obtain more than double the wear you would ordinarily expect, minus punctures which are annoying, undesirable and expensive. These protectors (139) I can recommend to every physician.

Care of the Car.—As in the case of all other machinery care exercised in keeping everything in A1 condition, the engine and friction parts clean, and allowing nothing to get loose, repairing every little thing as soon as discovered, will result in longer wear with better action and a greatly lessened expense account at the end of each year.

M. Clayton Thrush, M.D., Philadelphia.

WITH AN AUTO EACH PATIENT RECEIVES AS MUCH TIME AS IS NEEDED

My practice takes me in the country, covering a radius of twenty miles, which, without swift transportation, makes necessary long hours on the road, short hours in the office, and as short a time as possible with each patient. With the automobile I am now using I am able to reverse the order: short hours on the road, much longer time in the office and as much time with each patient as I see fit to give. With such results it would not pay me to go back to horses. Besides the benefit in my business, one of the greatest blessings of the automobile is the relief from fatigue and drudgery of country practice. Instead of coming home with horses fagged and driver exhausted, one feels exhilarated and is ready to take one's family out for a spin.

My auto purchases covered both pneumatic-tired machines and solid tired, ranging from 44 inch to 30 inch wheels (117). I traded, sold or otherwise disposed of the various machines until I got my present car (118). This I am growing more attached to every day. It has solid 1½ inch rubber tires, 34-inch wheel, double chain drive, friction transmission, very long wheel base, and weighs about 1,300 pounds. It is easy to manage and costs little to maintain.

E. L. McCrea, M.D., Table Rock, Neb.

THE AUTO ALL RIGHT—IF THE RIGHT KIND

After reading through an immense amount of automobile literature I reached the conclusion that my ideal car for rough country use should be constructed with high wheels, solid tires, air-cooled engine and a friction drive, so a year ago I bought an expensive runabout (190) embodying these features and started out with great expectations. Like many others I have found to my sorrow that it is not merely the principle of construction which determines the practical value of an automobile, but also and mainly the manner in which this principle is applied.

First, as to tires: The advantages of solid tires are more imaginary than real; they chip easily. One and a half inch tires especially wear out rapidly; 700 miles is their very longest life; two-inch tires of course last a little longer. But the assertion of the manufacturers that they are good for 11,000 miles is a fable. Riding, especially on hard roads, is very much less comfortable with solid tires. On sandy roads high wheels are impossible; on muddy hills they slip and the driver gets stalled if he will not take the trouble to wind ropes around the wheels or use chains. And finally a high-wheeler is very much more difficult to handle than a pneumatic-tired machine and can never be speeded up like the latter. Concerning the cost of up-keep, careful records show that the difference is not great. In most country towns there are no facilities for putting on the solid tires and one has to ship the wheels away, which adds to the expense and waste of time.

The air-cooled engine overheats easily; and this fault is attended by other trouble—loss of power, knocking, pre-ignition, etc. Even the most painstaking air-cooling is inadequate in our summers, no matter what the manufacturers claim. Besides, an air-cooled engine contributes largely to the constant and very irritating noise and vibration.

The friction-drive, with which several manufacturers equip their cars, is certainly better suited for any other form of machine than it is for a self-propelled vehicle, and while it offers great inducements to prospective buyers or manufacturers of machines, it is undesirable. The greatest fault is the loss of power from the twisting action due to the difference in inner and outer diameters of the driven friction-discs.

I believe that a machine of this type would be a fair success in a city where hard, good roads and limited speed prevail; but I earnestly advise prospective buyers who live in a sandy, hilly country not to experiment with high-wheelers.

It is important to buy from a well-established manufacturer with a reputation, both because the purchaser will get a better machine and because there is always a good market for a second-hand car with a reputation for reliability. Vehicles of little known origin bring but a fraction of the original cost when changing hands. Leave experiments to those who have time and money to spare.

I may add that I am now the satisfied owner of a low-wheeled car of a very well-known make (189).

D. Tufte, M.D., Pelican Rapids, Minn.

THE COUNTRY DOCTOR'S CAR

After a thorough trial of the low wheel and pneumatic tire, with both sliding gear and planetary transmission, four months ago we began the use of the high wheel and solid tire with friction transmission (autos 176 and 178, illustrated on page 817). The change has been highly satisfactory, both from a physical and a financial standpoint.

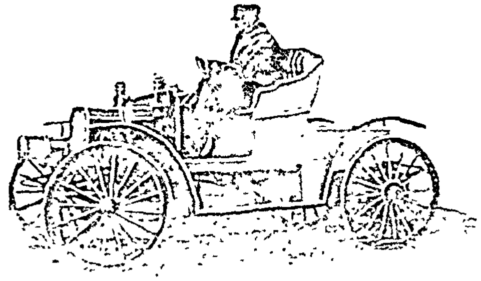

Fig. 37.—Dr. E. L. McCrea, Table Rock, Neb., finds solid tires satisfactory on his motor car (118).

Some of the numerous advantages of our present type of car are as follows: No delay on account of puncture; no gear trouble; ease of control; no repairs in four months' running (over 2,500 miles); no delay on country roads with high centers; good speed over rough roads; better time over sandy roads; less skidding in mud; much greater cleanliness, as less sand, mud and dust are thrown by narrow tire.

When repairs are under consideration the argument is all in favor of the solid tire and friction transmission, as the solid tire can be renewed for $7.50 and the friction transmission, complete, for $12, as against $40 for a pneumatic tire and $75 to $300 for geared transmissions.

The ease of control with the friction transmission is of great benefit; two foot pedals, one for the transmission and one for the brake, tell the story. A fraction of a second, without the hands being removed from the steering wheel or the eyes from the road, enables the driver to throw off the power and apply the brake.

With high clearance one can safely drive all traveled roads at good speed, a distinct advantage, especially at night. The high wheel will take uneven ground much easier than the low wheel, thus enabling better time on country trips. In sand the narrow tire gives less resistance, hence better speed with less strain. A recent run with our thousand-pound car demonstrated that we could pull a sandy up-hill stretch that had proved impossible for pneumatic cars of the same power (eighteen to twenty horse-power).

In our experience the weight should be evenly divided between the front and rear axles. Too much weight on the front axle causes hard pulling in soft ground, thus necessitating slow speed, which overheats the engines, while excessive weight on the rear axle causes undue wear of tires.

The item of greatest weight is perhaps that of fuel consumption. The high wheel, being of lighter weight, power for power, and its narrow tire offering less resistance, the gasoline consumption is only about one-half. The first cost is less and the up-keep nominal.

The high wheel is more generally useful. We are using our machine on rough country trips that have proved so costly to the pneumatic type that the owners refuse to make the attempt again in their cars.

The chief objection consists in the increased noise and awkward appearance of the high wheel as compared to the pneumatic.

E. M. Fisher, M.D., and H. A. Ingalls, M.D.,
Roswell, N. M.

HORSE SENSE

To write a communication of value on the auto question it seems to me two things are absolutely necessary. First, the writer should have had an experience of two or three years, so that the first mushroom growth of enthusiasm will have been knocked off. This wonderful enthusiasm of the novice with his first auto is like the exuberant granulation on an ulcered surface and requires the caustic of experience to bring it down to a proper level. Second, the writer should write for the good of the public and not for the sake of advertising an auto factory.

When an autoist with a certain make of machine tells me that he has never had any trouble and that his repair expense for the last year has been only forty-five cents, I try to look as though I believed him, but begin to sidestep and seek information of some fellow who doesn't wear the brand of the Ananias Club.

A man who has ridden in a carriage for ten to twenty years ought to have acquired some horse-sense, and if he has accumulated a fair amount of this valuable asset he will know that an auto is a machine and, like any piece of machinery, it should be well cared for, and that at times it will get out of order.

I believe I am correct in saying that every busy practitioner who has tried the auto in his work feels (when the machine is running well) that it is the ideal mode of locomotion. So far as the physician is concerned, then, the whole matter is one of (1) practicability and (2) expense of first investment, taking into consideration the life of the machine and the annual expense of up-keep.

Regarding the first point, the position of the auto to-day is very different from what it was five or even two years ago. Most of the mechanical parts have been tried out, improved and standardized. In this respect the advance in the auto business has been much like the advance in surgery. For example, the operations for appendicitis and for gallstones and the operation of no-loop gastrojejunostomy for certain conditions of the stomach have become standardized, we may say, but not until after many years of patient labor and experiment.

As to the second question of expense and up-keep, I can only cite some of my own experiences, which began three years ago with a scond-hand machine—a touring car of a well known make (141). I had many pleasant trips in it and many trials and discouragements. Were it not that I am an optimist of the rankest type I should have become forever spoiled for autoing again—but I realized finally that I was struggling with a machine good for its type, but made in the experimental age.

In October, 1908, I purchased a four-cylinder, water-cooled 32 horse-power roadster vehicle (142), to my notion one of the most graceful and best proportioned machines on the market. I claim to know whereof I speak, for I was an interested observer at the Chicago Automobile show. One of the local papers called it the "niftiest" machine on the road—whatever that may mean.

I have used my car every day except one in my professional work. This was a day with the temperature from 10 to 14 below zero. The float stuck a little in the carburetor. This defect was adjusted and I have had no more trouble even on cold days. My practice occasionally calls me to adjoining towns thirty or forty miles away. With ordinary good roads I feel quite independent of the steam or trolley car. Thus far I have never had a breakdown or been obliged to stop to adjust the machinery.

Recently I was called on Sunday to a town forty miles away. It was impossible to reach it by train on Sunday and poor connections made it an all-day trip on week-days.

I started with the auto after dinner, spent an hour and a half at the consultation, and arrived home in the early evening. To make an eighty-mile trip like this in the summer or autumn in this length of time at a rate of speed such that the scenery means something to you; to have the cylinders "hitting" every time and every bit of machinery moving like clock-work, makes one feel that the auto is "a thing of beauty and a joy forever." I have power enough so that any ordinary hill is made on the direct.

As to expense of up-keep, I must say, even at the risk of being put down as a member of the Ananias Club, that thus far it practically has been *nil*. Such repairs as I have had were from slight accidents and no fault of the machine.

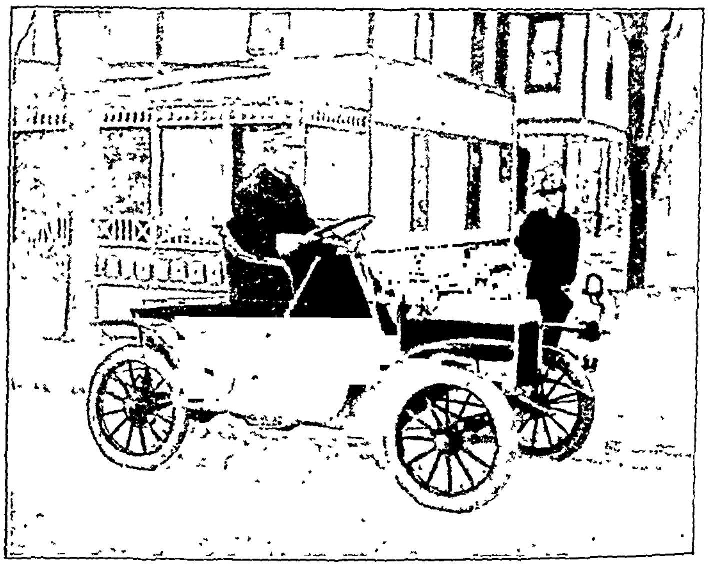

Fig. 38.—Dr. Harold M. Bruce, Cedar Falls, Iowa, in his car (127) with a folding rear seat for the wife and baby.

In the later days of a car's life we must, of course, expect a much greater expense for its up-keep, as various parts wear out and have to be replaced.

I have not kept an exact record of the ordinary running expenses, but can say that my car has run about 2,500 miles with an average monthly expense of from $22 to $25—but little more than the expense of keeping one horse at a boarding-stable.

To keep enough horses to do the work of the auto would incur an expense much greater than that of the auto. I am speaking now simply of running expenses, gasoline, oil, etc.

The time saved in making calls with the auto is unquestionably from one-half to two-thirds—so in the hands of the physician it very often proves to be a veritable life-saving device.

That a good, reliable machine be made at a more moderate price is a consummation devoutly to be wished, and, judging from the tendencies of the past, we have good reason to hope for much in this direction in the future. Yet I think it is a safe rule, for the guidance of either physicians or other prospective purchasers of automobiles, that worth in material and workmanship should not be sacrificed for price.

J. E. Allaben, M.D., Rockford, Ill.

DO NOT TINKER WITH YOUR CAR IGNORANTLY

The car for the practitioner must be capable of going over all kinds of rough roads in all sorts of weather, and, above all, be reliable. The ideal car is a gasoline runabout, with one, or at most, two, cylinders, and 12 or 16 horse power. The more cylinders the more trouble and expense, the extra power obtained is usually only wasted, and speed above thirty miles an hour is not essential. The engine should be water-cooled, with a float feed carburetor, and ignition by jump spark with dry battery, direct drive, single chain, planetary gear in an oil-tight case, multiple disc clutch, with at least two forward speeds and a reverse. The brakes should be sufficiently powerful to hold the car on any hill, as well as to bring it to a quick stop when necessary. The steering mechanism should be a wheel with worm and segment and should be irreversible.

Pneumatic, double-tube tires, at least 3 inches in cross section, should be used, as narrower tires do not wear so well and are more apt to skid. A folding rear seat greatly increases the usefulness of the automobile.

In general, for hard work over poor roads, a comparatively heavy car, weighing between 1,200 and 1,500 pounds, will do better than one weighing about 800 pounds.

In winter a top with front and side curtains is essential, as well as chains (126) for the rear wheels (to avoid skidding) and an anti-freezing mixture in the water-tank. If the car is kept in a heated stable or garage it will start as well in winter as in the summer and be just as useful.

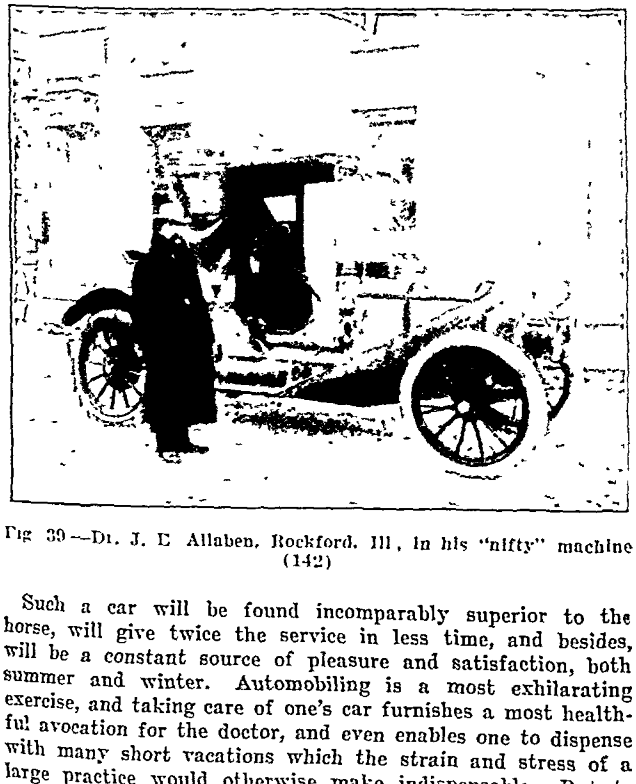

Fig 39.—Dr. J. E Allaben, Rockford, Ill, in his "nifty" machine (142)

Such a car will be found incomparably superior to the horse, will give twice the service in less time, and besides, will be a constant source of pleasure and satisfaction, both summer and winter. Automobiling is a most exhilarating exercise, and taking care of one's car furnishes a most healthful avocation for the doctor, and even enables one to dispense with many short vacations which the strain and stress of a large practice would otherwise make indispensable. But to get the best results one should remember that the gasoline engine is almost as delicate a piece of mechanism as the human body; and one should learn *not to tinker* with the adjustments unnecessarily or to try to improve on the work of the manufacturers. The diagnosis and treatment of automobile ills is a profession in itself and the *physician* should not ruin his machine and waste his time trying to make repairs which require an expert. He should, however, treat his car intelligently, keep it well cleaned and oiled, see that the gasoline and water-tanks are full and should not subject it to unnecessary jars and jolts.

By listening to the engine, the physician can very soon learn to tell whether anything is wrong, so that usually he can say just what the trouble is long before the engine stops and also whether he can fix it himself or whether skilled help is needed. Such warnings should never be neglected and thus breakdowns on the road may be avoided.

After a considerable experience with horses and poor automobiles (128), I have finally found a machine (127) which for my purposes is practically ideal.

Although an automobile costs more than a horse, the returns are many times greater, so that for the physician who really needs an automobile in his practice the extra expense is negligible. HAROLD M. BRUCE, M.D., Cedar Falls, Iowa.

SPEED AND THE CAR—WITH ESPECIAL REFERENCE TO THE COUNTRY DOCTOR

Classifying the profession in the most arbitrary manner as city or country doctors, we find the automobile problems confronting the two to be entirely dissimilar. The city physician, with patients thickly clustered within a small area, at all times within easy distance of repair shop or garage, driving mainly on good pavements, bound by stringent speed limits, is facing a proposition very different to that of his country confrère, whose call may come from five to fifteen miles away, over seldom traveled roads, unsafe bridges, or, failing these, flooded fords, with never a possibility of any aid but that which his own ingenuity and resource can supply. To the city man, the automobile (especially the electric with its fool proof absence of mechanical trouble possibilities) has been a considerable blessing; but it can not do for him one tithe of that which it is capable of doing for the country practitioner with thinly scattered clientele.

The limit of a horse and buggy, day in and day out, may be set down as approximately twenty miles. Then come changes with loss of time for return to the stable. The automobile, properly constructed in the first place, properly cared for in the second, has a mileage capacity for the average working day of well over the hundred miles, carrying its supplies self-contained, untiring, easily competing with the ordinary train, and vying with the speed of the fastest limiteds should necessity demand it. For the public, motoring is but in childhood, for the profession it is still in infancy. Many of us have yet to cut our first teeth. As in years back (until we learnt better) the railroad car was patterned after the stage coach it replaced, so we have found it hard to break away from the lines of the buggy that in emergencies carried us perhaps as fast as twelve miles an hour.

Partly by reason of this innate conservatism—partly because of that strange lack of business sense which in so many cases seems incompatible with the acquisition of medical eminence, the doctors' automobile has been considered necessarily a monstrosity in a class by itself. Few of us could count the mushroom concerns that have arisen, led a briefly marasmic existence, and expired, with no apparent raison d'être except the selling (to a medical profession crassly ignorant of the rudest rudiments of motoring), of a rattletrap contraption terrible to contemplate, let alone possess, as one's only means of reaching a patient. The first types of these, hazily imaged as the result of a confusion of ideas in the mind of some bucolic genius whose visual perception of the farmer's buggy became inextricably implicated with that of the gasoline engine which did his chores; materialized further from this nebulous conception, in some cases by the happy conceit of incorporating as its simplest available system of transmission the strap that ran his mother's sewing machine; and finally built with an ingenuous but by no means ingenious disregard for all known principles of automobile construction. Made to sell for but little more than the price of the horse and buggy it competed with (often to the glory of the latter), designed to travel about as fast, and purchased with the optimistic expectation of not visiting the repair shop oftener than the horse it replaced had visited the smithy for footgear.

That they were justified is shown by the fact that some of these weird concepts have worked out amazingly well in their own limited sphere, meeting with quite a vogue among that section of our profession whose ideals have progressed but falteringly beyond the possibilities of a horse and buggy.

But, while they may have filled a want with some few just starting out on their careers to whom the outlay for a modern car would be prohibitive, and while later many of these have undoubtedly been led by these base instruments into lives of grace, it can not be denied that these hybrids have done harm in disgusting many of us with automobiles as a class, and they have certainly been the means of delaying the profession as a whole from coming rightfully into its own.

So much for the past. What of the future? First, let it be at once stated that the ideal car for the doctor has not arrived. It is in process of trying out, or rather its features are, in many different cars, but the perfected combination is still for the morrow. The pneumatic tire with its resiliency, wide tread, and comparatively long untroubled life (this will sound like heresy to some) if its size and strength are adjusted to the weight it bears, is unqestioned in supremacy. What solid-tired narrow-tread wheel can travel over country roads of even fair surface at thirty-five to fifty miles an hour? Crediting the buggy type where credit is due, however, the wheels of the ideal car should be large, over thirty-six inches rather than under. The low car prevailing hitherto was due to two factors, the high price of rubber and a mistaken idea of necessity for unduly low center of gravity. Tires have fallen markedly in price, and the large wheel is by so much the nearer.

As to air or water cooling, I prefer air, as my roads are execrable, and a water-cooled system is a museum of plumbing to carry, to leak, and to swear at. Makes of air-cooled cars are few and far between, and the best of them far behind the best water-cooled in other regards, content to rest too easily on claims of less weight and complication in the cooling system.

Number of cylinders? Four at least, six if you can afford it. I have a 1909 four-cylinder car (192) of 28 horse-power, replacing a 1906 six-cylinder 30 horse-power of the same make. The four-cylinder drops to fifteen miles per hour on the same hill that the older car sailed over the crest of at thirty-four. Further, for crowded street work the six would slow down to five miles an hour on the high gear; the four can not drop below fifteen without changing to intermediate.

Touring car or runabout? Touring car every time. In the first place the touring car will bring nearly twice as much second hand, the purchasers of worn-out cars appear to be more interested in how many they will carry rather than in anything else.

But the reason of reasons is this. In an emergency you can put an injured man into a tonneau and rush him to hospital; you can not well do it with a runabout. A tonneau makes the car look twice as heavy; in cold figures it adds about 5 per cent. to the weight.

Every doctor's car needs a removable and folding top. (Always remove the top in fine weather, tricing it up by the corners to the roof of the barn or garage ready to lower quickly; a top adds much strain to a car.) Also a glass front which will not leak, which they all seem to do. This should fold for fine weather use. A glass front is a wonderful insurance against reckless driving, though I know one chauffeur who has had things come at him through three of them.

A word as to chauffeurs. I have known them to run up modest monthly garage bills of $300 and over. On the other hand, the two best I am acquainted with feel personally aggrieved if this exceeds $10. Between are all gradations. But, with few exceptions, the doctor needs no chauffeur. A handy man with a liking for machinery is all that is requisite to look after the car, to clean it occasionally (too much water is a great mistake, removing necessary oil) and to drive it in emergency. The profession is making another discovery—that the doctor who does not drive his own car is neglecting a most valuable part of his whole curriculum and spurning the finest recreation ever offered to him. The mere fact of driving requires undivided concentration of attention. No man can drive and worry about his cases. He forgets them, or if he thinks of them at all it is in brief elucidating flashes of memory. The healthfulness of the chauffeur's occupation is one we are not yet sufficiently alive to. As hanging is no longer fashionable for thieving, I see no reason why a chauffeur should ever die, except those past masters of the art who have mistaken, in moments of clouded mentality, telegraph poles or fast freights for boulevards.

There are a few other factors to consider—weight, price and speed. About a ton seems to be the accepted weight for such a car as I have indicated. Prices are falling every year, but have quite a distance to drop, viewing their present inflation. However, even in this year of grace, there are several very fair four-cylinder cars for sale around $1,500.

The question of speed necessarily includes length of wheel base, and, of course, horse-power. A long wheel base means an easy riding car, but increases its turning radius somewhat. It should not be less than 100 inches. Horse-power is a delusive proposition juggled with by dextrous agents as the shell-game man does the nimble pea. It is better to reckon by the speed the car will attain. A car that can not travel fifty miles an hour on a good road will be a poor hill-climber in most cases. Speed means power, but power does not necessarily mean speed. When we talk of the speed of a car it is to be remembered that we do not mean the speed at which it does its average work; that inevitably varies with the user, but the maximum speed of which the car is capable if pushed to its utmost. Every physician has experienced times when no possible speed is adequate. For that reason the power of the ideal car will be governed by the limits of safety, mechanical ingenuity and the doctor's purse.

Here and there throughout the country doctors are coming to realize the possibilities of the modern automobile in the practice of medicine. Two years ago, a little over a mile from here, a man fell from a telephone pole, fracturing his skull. Medical attendance was almost immediately available, but it was four hours before the ambulance from the hospital, eight miles away, reached him (the roads are miserable), and he died on the way in. One evening last November another man fractured his skull, singularly enough within a few yards of the previous scene. Twenty-five minutes from the time the telephone message reached the doctor's office the man was in bed in the same hospital, having been brought in, nursed in the arms of two friends, in the tonneau of the doctor's car that responded. This man is alive, practically recovered.

Such an incident throws an interesting sidelight on this new phase on which our profession is entering. As conservative citizens we deplore the manifestations of speed mania now and again recorded in the daily press. But these races have done something. They have acted as a reliable indicator of the possible safe speed for an automobile. The accompanying mortality shows that the limit is honestly sought; frequently attained. A physician's training peculiarly fits him for exercise of quick decision and steady nerve, and there is no reason whatever why a large number of doctors should not become drivers of the highest skill.

Then comes the very important question of speed laws. The attitude of the public in regard to this aspect of the automobile question is rapidly shifting from unreasoning prejudice to thoughtful appreciation. The near relative of a patient in urgent need of professional attention, who beholds the needful aid coming at the speed of an express train, is liable to undergo an acute change of heart on the subject of speed regulations as they affect the doctor. Certain cities have more or less recognized the fact that the physician who can skilfully drive a car at a fast speed to save life may be allowed a license denied to the man driving simply for pleasure. If lives can be saved by speed with perfect safety to all concerned, the average man is not averse to seeing it done. Rather is he coming to demand it. The physician is generally an honored and responsible member of the community in which he lives. If not, it is his own fault, and these lines are not for him, and it is right here that I would utter a warning. The public confidence once won can easily be lost again for all time, and for this reason this privilege can not, unfortunately, be placed in the hands of every member of the profession. There are in ours, as in all other walks of life, individuals unfitted to exercise any discretionary powers. Men who, finding the power at their disposal, would use it, not as it is meant to be used at the rarest of intervals for saving human life, but regularly, as a matter of course, to save dollars. For this reason the public must be rigidly warned and safeguarded. Warned by the profession itself against a too lavish bestowal of privilege; safeguarded by the powers that be with accurately devised and carefully worked-out regulations, which entrust this right to lay aside the law in great emergencies only to those who have shown themselves fit and proper persons to use it, suspending the privilege the moment it is abused, reinstating the erring member of the profession only when a sufficient time has elapsed and he has proved that the reprimand has made enough impression to prevent his transgressing again.

The doctor, looking rightly at his calling, realizes that he is the servant of humanity, its servant in greater degree than is the member of any other profession. The right to break speed laws is one that can only be granted by the people. As long as it is used solely for the people's interest there is no valid reason for withholding it. On the contrary, every reason why it should be granted. In every city the fire department has a right of way. Its speed is limited only by its capability for arriving safely with efficiency unimpaired. Rightly used similar privileges will, when the public is educated to the necessity and the possibility of its fulfillment, be thrust on the doctor. The same conditions apply; the imperative need of arriving quickly, but with the proviso that speed may not be purchased by any sacrifice of safety or damage to life and property. That physician who, in the course of a hurry call, runs over several chickens, some dogs and more people, arriving with the wreckage of the vehicles that did not get out of the way decorating his searchlights, is hardly the man that the people care to have handle the emergency case when (if ever) he gets to it. The necessity for this discrimination may not, however, arise, as there is the possibility that he is altogether likely to bring his John Gilpin's ride to a successful (?) termination by running over not only the patient, but at least a few of his solicitous friends before he can check his career.

JULIUS HAROLD HURST, M.D., Montecito Cal.

A GOOD HILL-CLIMBER

In 1906 I became so sorry for my horses that I bought a single-cylinder runabout (194). I ran it night and day, in all kinds of weather and all kinds of roads for two years. It is a fine car, for in this time I traveled eighteen or twenty thousand miles; but there were several serious objections to it, as there were to some other cars of similar make. These faults or weak points were, briefly, unreliability as to puncturing tires at wrong time in emergencies, low wheels, weak and dangerous points in single chain on differential in center of rear axle, insufficient and unreliable brakes, and unreliable transmission, as it would so frequently get out of order. The chain would break frequently or come off; then the water-cooling apparatus frequently got out of order; the pump would break or the radiator or pipes would break.

I decided that the car for my use should be air-cooled and have wheels at least forty inches high, solid rubber tires, fifteen or more horse-power, a friction drive and double-chain transmission. I determined to have one made according to my idea; then I saw in 1908 Automobile Number of THE JOURNAL a description of what struck me as an ideal car (193) for the practical physician; the more so, as it had a twin or double friction drive, thus eliminating any differential gear. I went up to Rochester, Minn., the last of April, 1908, to have dug out a bum appendix I had been toting around for some time, and on my way back home stopped in Chicago and spent a couple of days investigating the machine which had attracted my attention. I put it through sufficiently severe tests and bought a runabout at once, adding to it, however, some special features, namely, a rumble seat (so I can carry five passengers easily) and a canopy top and glass front, making my machine appear, as one of my friends remarked, like a cross between a milk-wagon and a hearse, but I told him that I took them from the cradle to the grave, and everybody was satisfied.

I have been running the car night and day since August, 1908—2,500 miles. The tires have never given me any trouble and I think that they will last for three or four thousand miles more. It is a good hill-climber and has been most satisfactory and reliable. I leave it in front of my office nearly all the time, night and day, and only send it to the garage for supplies. It is a little noisy, but I think this disadvantage has been lessened since I bought my car.

C. HOLTZCLAW, M.D., Chattanooga.

A PLEA FOR LOW-POWERED CARS

If one can not purchase a high-priced and high-powered car, excellent and satisfactory service can be obtained from one of a lower price and lower power. There are several single-cylinder and two-cylinder cars of much merit, both in service and up-keep, some of which sell for little more than $500. The up-keep of low-powered cars is decidedly less than that of the multi-cylinder; gasoline, oil, tires, ignition and repairs are much in proportion to weight and power of the machine. While the speed of the low-powered cars is less than that of the higher powered, it is sufficient for the physician's use—all that the roads allow or the law permits. The owner of the lean purse can get nearly as much satisfaction out of his single-cylinder or two-cylinder car as his neighbor from his four or six cylinders, and if under the necessity of doing so can take care of the car himself.

The up-keep of a motor car is somewhat a matter of individuality and environment; careful driving and daily inspection go toward the reduction of expense. The physician, whenever practicable, should keep his car near his office.

I have driven a single-cylinder (5 x 5) chain-drive machine (144) daily, summer and winter, during the past three and one-half years, at a total expense of $250 yearly. The machine shows but little wear and will be as useful for the next three years. Yearly will be required one set of tires, one extra shoe and two or three tubes, dry cells, four to six sets, one chain if a "chain-drive" machine; gasoline will equal about fifteen miles to the gallon; oil ten to twenty gallons; the repair bill for tires, breakages and accidents may be a trivial or large amount, depending largely on the care and intelligence bestowed on the machine. The tire expense can be lessened by careful driving, especially around sharp curves and corners, by avoidance of skidding, of overloading the car, of driving over sharp objects, nails and glass, and by keeping out of ruts. No grease or gasoline should be allowed on the shoes; nothing damages rubber faster than oil. Tires should be kept well inflated, thus giving longer wear, less internal friction and liability to puncture. When a tube is punctured it should be immediately removed and a sound one inserted. The early repair of "blow-outs" will save much tire expense. As soon as one is noticed the shoe should be removed and heavy canvas applied inside the shoe, reaching from one edge to the other, fastening it with rubber cement; or an inner "tube-protector," which is composed of rubber and fabric, may be applied. With such repairs I have had a shoe run a thousand miles without any further trouble. External cuts should be vulcanized. Chains applied to the driving wheels prevent skidding to a large degree when the speed is not too fast, and with no injury to the tires.

On low-powered cars dry cells are sufficient for the electrical energy. Fresh cells should always be bought, handled carefully, and the cells connected in such a manner that no two will be in contact, short-circuiting, and that no water can gain access to the box. Each cell should be tested with the ammeter before being connected; also when the amperage drops below six or eight, the cells should be removed, otherwise the engine will begin to "miss fire," which will puzzle the novice to locate the trouble. With good batteries, clean electrical connections, gasoline and oil in plenty, few troubles will arise. The carburetor or timer should not be tampered with when properly set, and the manufacturers usually set them correctly; they seldom need changing.

In the winter the best anti-freezing solution to use in the water-system is a 25 to 40 per cent. solution of denatured alcohol; the 40 per cent. solution will withstand a temperature of minus 5 degrees without freezing. I have found this solution more satisfactory than calcium chlorid.

What car shall the man with limited means buy? So much depends on himself, his mechanical abilities, his environment, his social and family requirements, that each one must solve this question himself. A good single-cylinder car is better than a poorly constructed four-cylinder. For the inexperienced I believe the best initial investment would be a single-cylinder or two-cylinder car. These cars can go anywhere and do all the work one requires of them—and will stand a great deal of abuse. Standard models should be chosen, which have been well tried and have an established reputation.

N. B. Bayley, M.D., Haverstraw, N. Y.

RESERVING THE AUTOMOBILE FOR GOOD WEATHER AND GOOD ROADS

Many automobiles are manufactured and advertised as just the right car for the physician, with the one object mostly in view of selling the car regardless almost of its worth compared with other machines. In order to decide which car to buy, one needs to inquire of each owner about his experience. Yet this plan will fail sometimes, for a car giving success in the hands of one man may prove a great expense and disappointment to another.

The car I have used for two years except this winter (illustrated on page 826) went through most all kinds of weather and roads last winter. This winter I had recovered from my ambition to use an automobile regardless of weather conditions, and in preference to using a horse and buggy or automobile I have gotten along very well using street cars. This is a way of transportation which means the least amount of trouble after calls are made. The care of a horse and buggy or an automobile is no small item. I have owned seven different horses in the past fifteen years and one automobile and feel that I am safe in making this statement regarding both.

The automobile I have (179) has one cylinder eight to ten horse-power two cycle, water-cooled engine. I have used this machine very successfully and shall begin its use again about April 1. It is about as good as ever with exceptions of paintings and top, both of which show effects of age, rain and sun.

I have solid tires (196) on rear wheels. There is so little weight on the front wheels that I very seldom have trouble. A few days ago I looked my car over and found that all there was wrong was that one of the pneumatic tires in front was down, so if I wanted to ride to-day I could not on account of the pneumatic tire, as usually is the case nine times out of ten with most automobile troubles. Unless you have money to spend freely I think it is best to do away with pneumatic tires, or if your car will not work as well with solid tires, sell it to some one who does not care so much for expenses and buy a car which will do the work with solid tires as well. Or if you want to buy a car, look around and see where you can find one with solid tires before you buy.

My experience has been that I have had no trouble with any part of my car with solid tires that I did not have when I had pneumatics. In addition I am now saved the great trouble I had with pneumatics.

J. E. Asay, Rock Island, Ill.

A PHYSICIAN'S MOTORCYCLE

I purchased my motor cycle (147) in June, 1907. I have driven it over 4,500 miles at a cost of $57.18. Had I taken care of my machine personally the expense would have been reduced by about $15. This makes the expense for running the motorcycle approximately 1¼ cents per mile. I have had but little trouble, and this mostly during my first two months of apprenticeship. Only once, because of a broken roller, have I failed to come in on my own power.

To a man who has been a bicycle-rider the use of the motorcycle is a pleasure indeed. By merely a twist of the wrist he can get all the speed and power he desires. As to drive, I have only tried the chain, and found it very satisfactory; I am still using the same two chains I got with my machine. I find a pleasant speed carries me about twenty miles an hour, which is at least twice the speed a team can keep up on long drives. My machine is never tired, and after a long trip, with a pumpful of oil, it is ready for another journey.

The use of the motorcycle during the hot months of summer is especially satisfactory. When the team suffers from the heat and can be driven only at a moderate speed, then the motorcycle will take a tireless gait that will create a breeze and make riding a pleasure. A motorcycle can be used over roads where an automobile would not prove satisfactory, from the fact that the former has two wheels while the latter has four. A mere path by the roadside is sufficient for the motorcycle. By the use of the motorcycle one can complete his country rides in about one-third the time necessary for the same distance by team. Thus he has more time for study, recreation and office work. I am fully satisfied with the use of the motorcycle (illustrated on page 817) in my practice.

James E. Taylor, M.D., Ovid, Mich.

FROM THE USER OF AN AIR-COOLED CAR

Twenty or more years ago, before the telephone became of such practical importance, the average doctor could get along without it. To-day the physician simply could not meet competition if he tried to practice without a telephone in his office, and the time is coming when the same may be said of the automobile as compared with the horse for practice in the city. The present condition of the roads in the country encourages considerable difference of opinion. In the city there is no argument. The automobile has won. My personal experience extends over a period of three years. I originally used a two-cylinder runabout (182), and am now using a four-cylinder, air-cooled car (181). My present machine, illustrated on page 827, is far superior to the other.

George Edwin Baxter, M.D., Chicago.

I have owned and used a ten (183) and a fourteen horse-power machine (198), the latter of which cost $825. Either of these would have been satisfactory for good level roads, but both were too light for the steep hills and rough roads in and around Cincinnati. I am running a twenty-four horse-power, four-cylinder $1,250 machine (180, illustrated on page 826). The expense of an automobile carefully run is about equal to that of two horses, but it will do the work of three or four, besides saving much time and thus lightening the doctor's day's work. E. W. Mitchell, M.D., Cincinnati.

I have driven an electric auto over 2,800 miles in my practice in this city with the greatest satisfaction. It has never given the slightest trouble. I have never made an adjustment, tightened a bolt or screw. My machine (163, illustrated on page 813) is always ready to go at a moment's notice. Expenses for repairs have been nothing. The electric auto with a mercury arch transformer for charging is in my opinion the best equipment for a physician with a city practice.

W. P. Armstrong, M.D., Springfield, Ill.

I have covered 4,500 without mishap since May. My machine (164, illustrated on page 827) is ideal in a city with good streets. The machine is too light for extensive use on bad country roads, but its very lightness guarantees the minimum expense for tire, oil and gasoline. In exact tests I have ascertained that I get about nineteen miles out of one gallon of gasoline while using my machine in my daily work, which means slowing down at every street corner, and a stop practically within every mile. My total expenses for tires have been $16.50, retreading of two tires $14, patching of one, $2.50.

Hugo Ehrenfest, M.D., St. Louis.

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Address

THE UNITY OF THE MEDICAL SCIENCES *

ALGERNON T. BRISTOW, M.D.
BROOKLYN

The animal body is the most complicated and wonderful piece of machinery in the world. It is the only engine which generates its own power, disposes of its waste products and automatically renews its parts. Within the compass of the human frame is an elaborate hydraulic system having not only a double-acting force-pump and also a suction-pump for the purpose of producing a negative pressure in the veins and to assist the return circulation. The nervous system may be likened to the telephone system of a great city, for it has all the local call stations and also a central station, which we call the brain, which is so complicated that, elaborate as are the switchboards in our great exchanges, they are simplicity itself compared with the brain. The digestive system forms the furnace in which the fuel is received for the generation of power, while the skin, kidneys and lungs make up a complicated apparatus for getting rid of the waste products of combustion.

Besides this, there are numerous ductless glands which exercise a regulating function on the economy still but imperfectly understood — indeed, in some cases, not understood at all. The so-called parathyroid glands are four little insignificant bodies tucked deep into the recesses of the neck behind the thyroid itself. They are not larger than a pea, and yet when they are removed accidentally in the course of an operation for goiter the patient is afflicted with a strange disease called tetany, which is fatal if all these little bodies, usually four in number, have been sacrificed. We are entirely in the dark as to the function of these mysterious bodies. We do know that they are essential to life, minute though they are.

As the art of medicine concerns itself with the care of this complicated mass of machinery and its repair when out of order, it is not strange to find that almost every science known to man is represented somewhere in our art. If we restrict ourselves to the seven principal branches taught in the schools, namely, anatomy, physiology, materia medica, chemistry, practice of medicine, obstetrics and surgery, and speak of these subjects alone as the medical sciences, we shall but touch on the borderland of the art. Each one of these subjects is in itself a science made up of a number of different sciences.

Take anatomy, for instance. When we come to consider the bony system alone, questions of strain and material at once come up which can be solved only by sciences like those of mechanical engineering and architecture. The first boat-builder who went a step beyond the primitive dugout must surely have gained his idea of a keel and ribs from the human skeleton, so close is the analogy between the methods of construction. There are some problems in connection with the subject of fractures which the assistance of an architect might elucidate. I was once describing to a well-known architect the curious and ingenious way in which the heart is supplied with blood, and he at once pointed out that the position of the coronary arteries just above the aortic cusps not only supplied the heart with blood through the arterial rebound, but that these vessels also prevented the "water-hammer" action of the blood on the valves themselves. The same principle is made use of in the length of pipe above the faucet of the kitchen sink.

We need the assistance of all the natural sciences to aid us in understanding the functions of the body, and it is this which brings about a unity in all the medical sciences. They are all interdependent and constantly merge into one another.

There is between sciences, however, whether physical or abstract, one common bond of union, namely, the fact that they all have for a foundation the mother of all sciences, the science of sciences, logic. Without correct methods of reasoning no science can exist. The very definition of the word "science" is "knowledge gained and verified by observation and correct reasoning." The errors of the mind may be classed under two heads, either as errors of observation or of erroneous deductions, from faulty methods of reasoning. Thus if our methods are illogical our science ceases to be such. All the errors of the past are due to one or other of these causes, and for centuries man has been blundering onward from truth to error and painfully back again to truth. Tennyson describes us well as "children crying in the night with no language but a cry." The knowledge of yesterday is the foolishness of to-day, and the wisdom of to-day will be but as folly to the future. We stumble along in our pathway toward the light, gaining a little real knowledge in each century, a little enduring truth.

There is no science which has suffered from the want of logical observation and logical thinking more than that of medicine. The fallacies of medicine would fill several volumes. Go back to the days of alchemy, the romantic mother of modern chemistry, if you would wander among the strangest mazes of human thought. Those were the days when the curious doctrine of signatories was taught and a remedy was supposed to be precious and potent in proportion to its repulsiveness. "Eye of frog and toe of newt!" Men have been brewing witches' broth for mental and bodily woes for centuries and are only just finding out what is witches' broth and what a true elixir of life. In medicine the most common and most dangerous fallacy in which we are prone to indulge is that which mistakes a sequence for a consequence. *"Post hoc ergo propterea hoc,"* is a very ancient maxim, but it has been the corner-stone of quackery and superstition through the ages. In logic it is sometimes called the fallacy of the false cause. We assume that, because two facts are consecutive in time, they bear the relation of cause and effect one to the other. Thousands of people to-day believe that a change in the weather is caused by a change in the phases of the moon, although it has been demonstrated over and over again that the moon can have no such effect. In the same manner, in the dark and middle ages, any plague, war, or other calamity which occurred during or after the appearance of a comet was ascribed to the strange and unknown visitor.

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* Address delivered before the Brooklyn Institute of Arts and Sciences.

Most of the errors of medical practice, much of the voodooism and so-called science, Christian and otherwise, are based on this form of fallacy.

An amusing instance of this fallacy came under my observation the past summer. A young woman of education gave as one of the reasons why she believed in the science of the thrifty heiress of Dr. Quimby the following instance of what she believed to be its power in her own person. She had, she said, been the subject of an attack of scarlet fever, but, having received mental treatment, had been scarcely ill at all and was about in a day or two.

Nothing is better known to physicians than the occurrence of extremely mild cases of this fever in certain individuals. In some cases it is so mild and the symptoms so slight that it is almost impossible to be certain of the diagnosis. It was so in my own children, although their nurse at the same time suffered from a severe attack of the disease. This fact being admitted, it is evidently entirely erroneous reasoning to draw the conclusion that the mild case of the person in question was due to any mental treatment and not to an inherent immunity which she possessed, as do many others who have precisely similar attacks without the aid of Eddyism. These attacks are, however, quite capable of conveying the disease in a serious and fatal form to another individual less fortunate and that young woman will never know what other persons she infected when she went out, as she thought, entirely well.

The history of medicine is full of instances of vaunted remedies whose fame has rested on similar fallacious reasoning. Yet the public is prone to blame the doctors because they do not at once rush into new lines of treatment with enthusiasm before they have thoroughly verified the facts and proved the conclusions. There is nothing more dangerous and at variance with the scientific mind than hasty generalizations, based on ill digested and imperfectly observed facts. Only a few weeks ago one of New York's great journals gravely scolded the medical profession because it had called in question the power of an alleged remedy for an obscure and incurable disease of the spinal cord, to produce the results which its exploiters claimed for it, since all of us knew perfectly well that the treatment in question could not have the slightest effect on the anatomic changes in the spinal cord which are permanent and the cause of the symptoms of the disease. As the result of a possibly well meant but ill-judged journalistic puff many poor people will be woefully deceived and betrayed.

It is, therefore, necessary—nay, imperative—before coming to conclusions in such matters, to verify our facts by a long series of observations, and even then to be careful not to be too positive. There must be logic in medicine, even if there is no medicine in logic.

There is no more interesting study in medicine than the physics of the body. Physiologic chemistry is a science which is only in its infancy, but already Chittenden and many others have shown us that our methods of diet are open to much criticism. The sustenance of the human body is a problem in fuel combustion, and the elimination of ash, or, as we sometimes term it, the waste products. The body burns only a more complex and more costly fuel than that employed by the steam engine, but the basic facts of combustion remain the same in both machines. Under a steam boiler some fuels are highly wasteful, others economical. Some leave little ash, others a great deal. Some load the furnace flues with soot and the grate bars with clinkers and so stop the draught. Others burn freely. It is the problem of the mechanical engineer to furnish his boiler with the kind of fuel best suited to the work, so that the greatest amount of energy may be obtained with a maximum of economy and, what amounts to the same thing, the minimum of waste. Because men have not learned that the furnaces of their bodies require similar treatment, which involves not only a proper selection of food, but its use in exactly the proper amounts, they have fallen a prey to many diseases. The poor, alas, suffer from insufficient food of poor quality: while the rich have their own peculiar diseases, due to a plethora of foodstuffs needlessly rich in heat units. Strange to say, the diseases which result from the two conditions are not, after all, so very dissimilar.

While we are young, a large amount of reserve, both in the glandular apparatus which takes care of the waste and the assimilative apparatus which appropriates the heat units contained in the food, readily takes care of excesses in diet. Moreover, in the young the necessities of growth have to be provided for—a matter by no means to be lost sight of. As the period of growth comes to a close—in short, as we grow older—the amount of our reserve diminishes and, unless we measure our intake and make it commensurate with the work required to be done, we shall soon find that the mechanism runs with friction, because, if we take in more than we can burn up, the blood soon becomes charged with waste products which the skin, kidneys and lungs are unable to dispose of. When these waste products circulate in the blood, they act as veritable poisons and bring about changes in the whole system, but more particularly in the vascular system.

Our veins and arteries constitute an elaborate hydraulic system, subject to the same laws of hydrostatics that govern our city water-supply; if they become weakened, they may burst under normal pressure, even at their weakest point. This is usually in the brain, and then we say that the individual has an apoplexy. But the blood pressure in the arteries, through which circulates a fluid rich in waste products, is always much above the normal, rising from 135 mm. of mercury (which is about the normal pressure) to as much as 200 and over. If, then, we have the bad combination which results from a weakened vessel and too high a blood pressure, all can see the evil results which are likely to follow. In addition to this, as a result of the constant irritation of the waste products which have failed of elimination, we get a narrowing and hardening of the arteries, so that they decrease both in caliber and elasticity. To this particular form of vascular disease we apply the term of arteriosclerosis, and this is the disease of old age; in fact, it is old age. It is sometimes said that a woman is as old as she looks, but a man is as old as he is. A more accurate phraseology, from a physician's standpoint, would be to say that an individual is as old as his arteries. I know men in my own profession of 76 years, who are really 76 years young, and not 76 years old; while I know others who have not yet reached their fiftieth birthday whose actual age is by no means measured by the number of summers and winters which have passed over their heads.

Overeating has more victims to-day than alcohol—just exactly as the victims of typhoid fever far outnumber those of either cholera or yellow fever; but alcohol, cholera and yellow fever kill quickly, and the effects of these toxemias are vivid and startling, while we overlook the results of the slower and more subtle poisons because of their very insidiousness. When we think of blood-poisoning, we think of something swift and sudden that kills with a stroke. Do not, however, forget that the slow, insidious form of blood-poisoning which perhaps takes years to do its full work, is ultimately just as fatal to the body.

A want of proper food regulation and a disproportion between the necessities of the machine and the fuel fed into the furnace always results in this slow form of poisoning and invariably brings about a dangerous rise in blood pressure and a change in the caliber and elasticity of the arteries. There is an intimate relationship here between the chemistry of digestion, of elimination, and those problems of combustion which deal with waste, sustenance and repair. Physiologic chemistry teaches us the exact number of heat units required by the organism. This is also, however, as you readily perceive, a problem in physics and adaptation as well, and the two sciences are both concerned in the solution of the problem.

Metchnikoff, the successor of the great Pasteur, in his recent work on "The Nature of Man," has pointed out the important influence which the waste products contained in the large intestine have on the production of that disease which we usually call by another term—old age. He goes so far as to say that man would be better off without the large bowel, since it is the habitat of numerous putrefactive bacteria which excrete poisons which are taken up by the circulation and aid in the slow production of arterial changes. So another science is concerned in the problem. We started with physiologic chemistry, and we end with chemistry, physics and bacteriology, all of which we must call to our aid in solving the somewhat difficult problem of what constitutes a right living.

All these matters concern the individual; but there is another of the medical sciences which concerns not only the individual, but the nation and the race—sanitation. It is the science of most recent development, and yet, if I were asked to name that branch of medicine which is to-day of the greatest influence and use to the human race, I should say the science of sanitation. It is far more important to prevent disease than to cure it after it has seized on its victim; and there are all sorts of problems involved in sanitation which demonstrate in a remarkable way the dependence of one science on another in the difficult problems which face the sanitarian. But a few years ago we did not at all appreciate the grave menace to the health of thousands of human beings of the suctorial insects. At present we are only on the brink of discovery in this great field. Entomology has taught us a great deal about the life history and habits of this widespread species of insects. It is not too much to say that millions of lives have been brought to an untimely end through this medium. Almost a quarter of a century ago Laveran, a French scientist, showed that fever and ague was due to an organism introduced into the blood by the mosquito; and subsequent observers, by close observation, found that one particular species of mosquito alone, known as the anopheles, was the culprit, and that the disease was transmitted from one individual to another by anopheles which fed on the blood of the sick and then perhaps, at their next meal, transmitted the disease to an individual previously free from it. The night air always had a bad reputation for the production of malaria, which is nothing but a form of fever and ague; but we now know that it is not the night air which is to blame—differing, as it does, not at all except in temperature from the air of a sunlit sky—but the night-flying anopheles which is responsible for the transmission of the disease after dusk. We are all familiar with the labors of the late Dr. Reed and his heroic band, who submitted their own bodies to the sting of yellow-fever mosquitoes in the effort to discover whether or not they were the transmitters of this dreadful disease of the South. We hear a good deal nowadays of the cruelties of the medical profession in the matter of animal experimentation, but I can not refrain from asking if the public should not be willing to trust to the humanity of a profession many of whose members have offered up their lives as a willing sacrifice in the cause of preventive medicine. Three of the members of the commission of five became affected with yellow fever as a result of the willing exposure of their persons in this investigation, and one of them, Dr. Lazear, after calmly permitting a mosquito in a yellow-fever ward to sting him, died a victim of the disease. As a result of the labors of this commission and the investigation of entomologists, it has been settled definitely that yellow fever can be transmitted in one way alone, and that is by the sting of a particular variety of mosquito known as the *Culex fasciata;* and the disease can be transmitted in no other way—neither by clothing, nor letters, nor yet the persons of the sick. You may sleep in the same bed with a patient with yellow fever, but, unless you are bitten by an infected mosquito, you will not contract the disease. It is impossible to overestimate the remarkable consequences to this country which these two discoveries concerning the origin of malarial fever and yellow fever will have on our destiny. The problem of the building of the Panama Canal, great and weighty as are the engineering problems involved, is, after all, a problem of sanitation. If you can not keep your workers and engineers alive on the isthmus, no amount of engineering skill will ever be competent to build that canal. In the time of the French occupation, their men died off by hundreds and thousands; and we should not to-day be prosecuting this work with success were it not for the labors of men like Laveran and Reed. They taught us that, for the prevention of epidemics of this class, a frail mosquito netting was of more value than an army corps and any amount of shot-gun quarantine. There are other important public problems intimately connected with medical science, and which have an important bearing on the economic welfare of this land. As a profession we stand on the street corners, in the marts of trade, and in the public places, and cry aloud that typhoid fever is not a disease, but a crime, and that it is absolutely preventable. For the most part, the public will not listen to us. It goes on emptying sewage into the fairest of its streams, it pollutes its drinking-water at its source, and all along its outflow on its way to the sea, and the victims of typhoid fever, a filth disease, are carried through the streets to premature graves, as a consequence.

There is an economic side, as I have said, to this question. Let us take the expense to the state of an epidemic of typhoid fever. You know there have, in the past few years, been a number of epidemics in different cities in this state and in others. The sick in any one epidemic (not counting the dead) are numbered by hundreds. Take the Watertown epidemic of three or four years ago. They had, as I recollect it, about 1,500 cases. An individual never recovers from typhoid fever in less than four weeks, and is not available as a worker for at least four weeks more. The actual expense account in caring for an individual during an attack of this disease is about $300. This includes loss of wages, the expenses of the illness and the expenses of those who devote themselves to the sick person. An epidemic involving only 1,000 cases—if all the individuals recovered—would mean a loss of about $300,000; but this is a minimum. Half a million would be nearer the real truth. Typhoid fever costs this nation millions of dollars every year. The Panama Canal could be easily built with the waste caused by this epidemic during the years of the construction of the canal, and a large surplus would be left over for a fleet of warships to defend it. Yet we go on in the most irresponsible, childish manner, defiling our beautiful waterways and bringing grief and bereavement to unnumbered homes. In 1906 there were over 13,000 cases of typhoid fever in the United States, involving a money loss of over $4,000,000, and this goes on annually.

There is another very important economic side to this problem of sewage disposal. Why is it that the eastern states have so many abandoned farms, with ruined outbuildings and desolate and deserted farmhouses? From Maine, all through New England, you can get pages of advertisements from farm agencies, of people eager to dispose of their ancestral acres. They have the advantage of proximity to the market, but they can not compete with the west. But the problem of effective farming to-day in the east is the problem of effective fertilization of the soil. For 200 years we have taken out of the soil of this locality what we have not put back, and are suffering in consequence. Nature is a good bookkeeper and allows no forced balances, makes no dummy loans. You must put back into the soil what you took out of it; unless you do, the time will come when you are dealing with an exhausted soil and will reap but poor and insufficient profits. That is the position of the eastern farmer to-day. It costs too much to fertilize his land, and he can not, therefore, compete with the virgin soil of the west. No soil is inexhaustible. Do you suppose that the western farmer will not sooner or later be confronted with this same problem? It will take longer to exhaust the soil of the western states, but the same inexorable law will eventually require the farmer to put back what he has taken from the land if he would continue to reap the waving crops.

But how, you say, does this concern the disposal of sewage and typhoid fever? In this way: When we infect our streams with sewage and turn our harbors into gigantic cesspools, we are guilty of an enormous waste. We are throwing into the sea, from which we can not regain it, the very elements required to regenerate the land. What the soil needs is what is known as fixed nitrogen as opposed to the nitrogen which is free in the atmosphere and not available for the crops; but this is exactly what we are throwing into the sea every day. The average amount of fixed nitrogen eliminated by an adult is about 15 grams *per diem*, equivalent to half an ounce. In a community of 4,000,000, like New York, we are throwing into the sea every day (including the wastage from animals) more than 100 tons of nitrogen. Recently, as if this harbor of New York was not already a filthy cesspool, the State of New Jersey desires to add its daily contributions of twenty-one cities. And this is what every city in the United States is doing to-day—throwing away all this vast amount of nitrogen which huge communities, through the power of steam, have taken and are continually taking from the farms of the nation. And we can not get it back again. We are a reckless and improvident nation, and in our greed we are destroying this fair land. The loss of nitrogen involved in the deforestation of our mountain ranges is another source of waste, not to speak of the serious consequences which the destruction of our forests is having on our streams. He who plays must pay, and the nation, which is playing with its resources, will have a heavy debt to pay in a future not far distant. The problems of sanitation require, then, the aid of many sciences which must coöperate and act in unity if we are to stop the frightful waste both of lives and material involved in our present sins both of omission and commission.

To-day we hear a great deal about the yellow peril. A great fleet has been sent around the world as an impressive example of the sea power of this nation; and now our statesmen tell us that there is no yellow peril, but that this has been averted by skilful diplomacy and what is practically an alliance with that oriental power which lies nearest to our western shores. Nevertheless, there is a yellow peril not to be averted nor driven back by all our guns. I mean the plague. Of all forms of contagious and communicable diseases, this is the most difficult to guard against and, once landed on our shores, most difficult to eradicate. The medical science of bacteriology discovered the cause of the plague, the *Bacillus pestis*, a minute organism belonging to the bacteria. The disease is frightfully fatal; hence the importance of prevention. Here medicine called to its aid the science of entomology, not usually classed as a medical science, and by its aid showed us that this dreadful disease in the vast majority of cases was conveyed from the sick to the well by the rat flea. In every epidemic of plague it has always been noticed that the rats died by hundreds also; and investigation of their dead bodies showed the characteristic buboes or abscesses of the lymphatic glands, to which the disease owes its specific name, bubonic plague. Further investigation by the bacteriologist showed the bacilli in the bodies of the fleas infesting the rats. As these insects leave the dead and seek out the living, and sting human beings as readily as the rats, animals which before had been considered nothing but troublesome vermin, were now seen to be the gravest menace to the public health. A few infected rats, traveling in grain cars or in ships could establish a number of different foci of the plague in this country with ease. And the prevention or eradication of bubonic plague evidently depended on the destruction of the common brown rat. Much animal experimentation was necessary before it was proved beyond a doubt that fleas from rats infected with plague were capable of conveying and did, in fact, convey the disease to the healthy. This proof was not obtained without a sacrifice of life among the laboratory workers. In fact, a number of scientific men, both in this country and in Europe, have lost their lives while working with the organism of the plague. They died martyrs of science in the cause of humanity, unnoticed by the public, unlauded by the press, and unsung. We, their comrades, cherish their memory. The plague is the real menace of Asia. This is the real yellow peril to be averted only by the science of preventive medicine and the enlightened cooperation of an intelligent government. The trinity of medical sciences — pathology, bacteriology and entomology — have pointed out to us the cause and the means of prevention.

What has been the reward of the physicians of the Public Health and Marine-Hospital Service when they have pointed out to infected communities the necessity of radical sanitary measures if they would prevent the spread of the plague, not only in the community affected, but to regions far beyond its borders? When the Marine-Hospital Service, a year or two ago, stated that there was plague in San Francisco, they were met by the fiercest denials and denunciations, both from the press and the city officials of San Francisco. Every effort was made to discredit them with the national government, and their removal was sought for with assiduity and venom. More recently similar scenes have been enacted in Oakland, a suburb of San Francisco. History is repeating itself, and local interests wish to make themselves paramount to the national welfare.

Thirty years ago there was a national board of health. Its officials declared that yellow fever existed in New Orleans. As a consequence, other ports quarantined against that city. The health officer of the State of Louisiana denied that there was yellow fever in the affected city, although people were dying of that disease every day. As a result of this conflict between the state officials and the national board of health, influences were brought to bear on Congress the following year and the appropriation was withdrawn and the board discontinued its functions, and from that time to this we have had no national board of health. There is nothing now between the plague of Asia and our own land but the officials of the Marine-Hospital Service, courageous and capable medical men, incorruptible and undismayed, either by cajolery, threats or any other attacks which may be made against them by a band of politicians which are working for their own pockets all the time instead of the national welfare. Why did the state board of health of Louisiana thirty years ago deny the existence of yellow fever? Why did San Francisco, more recently, strenuously deny the existence of the plague within her precincts? Why to-day does Oakland do the same, although rats have been found in the streets, dead of the plague, and it has been found that the infection has spread to the squirrels in the vicinity? It is because to acknowledge the existence of the plague would be bad for business—local business—the business of San Francisco, the business of Oakland. The business men of these communities are willing to endanger the lives of their fellow-citizens throughout the United States and to run the risk of the general paralysis of business entailed by a general distribution of the plague in the United States, rather than acknowledge the existence of the disease and set their own house in order and stamp out the plague before it spreads beyond their own borders. It is a strange and melancholy spectacle. The business morals of our country are sadly in need of reform in other circles than circles financial, when dollars are of more value than lives and the temporary business prosperity of a few is allowed to outweigh the welfare of the nation. We have a Department of Agriculture which looks after the plants and the lives of beasts, but up to this time the lives of plants and beasts are of more value to Congress than the lives of the citizens. Horses and cows and pigs cost money, and so their interests must be carefully conserved by a department set apart for the purpose; men and women and little children are very cheap commodities; therefore, we have neither a national board of health nor a department of health as a part of our national government.

There are other questions of public health which can never be adequately handled in any other way, in my opinion, than by a governmental Department of Health, which would be out of reach of the politicians. A new national health board would soon meet the fate of its predecessor. But a Department of Health would be above interference which could end its existence. The question of stream pollution is really an interstate problem which can not be handled by the individual states, except within their own borders. It is, to be sure, a penal offense in New York now to empty sewage into a stream of potable water without the permission of the state Board of Health; but of what avail to police one side of the stream if you do not control both sides and the source as well? Lake Champlain, for instance, is protected on the New York side and contaminated on the Vermont shore. And there are many instances of streams which are protected in New York, but contaminated in Pennsylvania. Nothing but a long and doubtful suit at law between two states, under our present system, can settle questions such as these. The Chicago Drainage Canal presents such a legal problem. The State of Illinois turned the entire sewage of the great City of Chicago into the Mississippi River, in spite of the strenuous objections of communities on the shores of that mighty stream. Questions such as these are crowding fast on our civilization and will never be adequately handled by anything short of a governmental department. The fact has become more and more evident to the thoughtful of the medical profession. Local business interests should never be allowed to imperil the welfare of the nation; and when men are so short-sighted, not to say selfish, as to be unable to see that their own local interests would suffer in any national calamity a strong central power should compel them to recognize the paramount rights of the majority.

Thus we see that every problem in medicine is complex, many sided, and that medicine is an art almost without limitation. In its broad domain, almost all sciences are brought together to work in unison for the benefit of the individual, the nation and the race. No single medical science, by itself, is competent to solve a single problem, whether in state medicine or individual therapeutics. All the sciences embraced in our medical art (and they are many) are necessary to the solution of these problems. And unless they all work together in harmony to a common purpose little will be accomplished; and this is what I conceive is meant by the unity of the medical sciences.

234 Clinton Street.

Original Articles

THE NERVOUS DISORDERS IN WOMEN SIMULATING PELVIC DISEASE

AN ANALYSIS OF FIVE HUNDRED AND NINETY-ONE CASES*

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PHILADELPHIA

In presenting this paper, I have been prompted by a desire to give the result of several years' experience obtained in the treatment of gynecologic patients in the clinic of the Woman's Hospital of Philadelphia. The symptoms of the two great neuroses, neurasthenia and hysteria, are constantly being misunderstood in their relation to pelvic disease. The nervous phenomena of these affections present only confusion to the minds of many of us, nor is this strange when nervous specialists are still contending among themselves as to their symptomatology. Morton Prince, of Boston, maintains that the whole symptom-complex of neurasthenia is but one of the manifestations of hysteria, while Babinski goes so far as to maintain that hysteria itself is but a disease of suggestion brought on by the examinations made by the physicians. We may, therefore, pardon the great body of the medical profession if under such trying circumstances the symptoms of these neuroses are misinterpreted. In order that the vagueness in regard to these affections may be eliminated from the mind and replaced by clear ideas concerning these diseases, it is necessary to reason from certain basic principles formulated by the majority of our eminent neurologists.

NATURE OF NEURASTHENIA AND HYSTERIA.

Hysteria and neurasthenia occur in those persons of a normal as well as in those of a neurotic inheritance, and men and women both are subject to these affections, though the largest number of cases occur among women. A close study of these nervous disorders proves that true organic pelvic disease plays but an insignificant part in their development, and that their real origin must be sought elsewhere. The exciting factors are to be found in the environment plus heredity. When neurasthenia occurs in those in whom hysteria is latent, it acts as any other cause in the development of the latter. Hitherto the symptoms of both affections manifested in one individual have commonly created confusion as to their true import. In the adolescent and adult state, all humanity is subject to great strains. The most prominent among these are, first of all, the results of a defective education in which self-control and restraint are not inculcated early in life, and a too close application either to pleasure or to study; later the bearing and rearing of children, household cares and worries, nursing of members of the family—a strain not only physical but also mental—financial stress, grief and shock occasioned by death, by accidents, by troubles, by frictions of all kinds, great and small. Anxieties and cares, no matter how trivial in character, must be viewed from the standpoint of the patient. The strains mentioned are far more potent as causes of the neuroses than organic pelvic disease. The nervous symptoms connected with organic pelvic disease are, indeed, very limited. While it is not to be denied that there are present local pain, pain referred to the back, to the hips and thighs, together with general indications of ill health, these symptoms do not of themselves constitute true functional neuroses, such as neurasthenia or hysteria. They are but symptomatic of the pelvic disorder, just as they may manifest themselves in connection with any other visceral disease. The distinctive term "neurasthenia symptomatica" or "spurious neurasthenia" has been applied to nervous symptoms present under such conditions. The hold of the doctrine of "reflex nervous disorders" on the profession for so many years is little short of marvelous, but its fallacy has been demonstrated beyond dispute by our increasing knowledge of nervous diseases.

On account of limitations of space, it will be necessary to present in a brief and concise form only the most prominent symptoms of neurasthenia and hysteria. True neurasthenia or "neurasthenia simplex" is essentially a "fatigue neurosis" (F. X. Dercum). The cardinal symptoms are a ready exhaustion of the nervous system with diminished elimination of nervous energy, increased irritability, and as a result decreased resistance to impressions from without. In this affection the wear and tear of the nerve cell is greater than its recuperative power and the physiologic equilibrium is impaired. The symptoms of this great "fatigue neurosis" are divided into motor, sensory, psychic and somatic phenomena. Those of the motor system consist of ready muscular fatigue made manifest on exertion due to loss of strength in the muscles of the back, legs and arms. Actual paralysis, however, is never present in neurasthenia.

The backache is usually referred to the lumbar and sacral regions; it often extends upward over the dorsal area and downward over the gluteal muscles. Aching of the limbs, when present, is referred to the thighs, legs, arms and shoulders. The special senses also present the symptoms of fatigue. On reading, the letters may become blurred, and, if it is persisted in, headaches, both limited and diffuse, supervene. The hearing may become dull, as may the other special senses. The psychic condition manifests itself by a lessened capacity for sustained mental action. Persistence of mental effort brings on the symptoms of exhaustion with its fatigue sensations. Thoughts do not flow readily, the will power lessens, indecision arises and increased mental and emotional irritability manifest themselves. Sleep becomes broken and disturbed, bad dreams ensue and in severe cases obstinate insomnia may result.

The somatic phenomena are commonly gastrointestinal atony, with its diminished secretions, flatus and constipation. The circulatory disturbance is usually shown by more or less enfeeblement of the heart's action with cold hands and feet. This condition is often accompanied by accidental heart murmurs.

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* Read before the Alumnæ Association of the Woman's Medical College of Pennsylvania, May 21-22, 1908.

In addition to these symptoms, others may make their appearance, called the secondary or adventitious symptoms of neurasthenia. They are but the outgrowths of the essential fatigue symptoms and also present motor, sensory and psychic phenomena. The motor symptoms are tremor and spasmodic fascicular jerkings due to the primary muscle fatigue.

The sensory symptoms are those sometimes associated with a neurasthenic headache, such as sensations of constriction, of pressure, of throbbing, of dizziness and of fulness. The not infrequent phenomena of ringing, roaring and buzzing in the ears are also secondary phenomena. These sensory outgrowths are due to lowered vasomotor tone so that the slightest exertion may at times affect the intracranial circulation.

The secondary adventitious psychic symptoms are manifestations of loss of will power, as shown by indecision and uncertainty. Sometimes special forms of fear, the various phobias, are added to these psychic phenomena and are also outgrowths of chronic fatigue.

Symptomatic or "spurious neurasthenia," as before stated, is the result of visceral or somatic disease and very imperfectly simulates nervous exhaustion. Hysteria, the great "psychoneurosis," a functional disease of the cerebral cortex, is a common disease of daily life and is constantly unrecognized by physicians. Erroneous diagnoses of visceral and grave organic disease are frequently made because physicians are unfamiliar with its syndrome, especially unfamiliar with its sensory stigmata; that is, its areas of painful hyperesthesia. The attendant suffering is often far in excess of that from organic lesions. The painful areas are most frequently found in most unexpected places on the skin and mucous surfaces and are commonly misunderstood as indicating visceral disease. On examination, especially pelvic, every anomaly discovered must not be considered as explaining the symptoms. Usually the findings are nothing more than individual peculiarities and do not of themselves indicate medical or surgical interference. Under normal conditions the uterus now and then deviates laterally, is often more or less anteflexed, is sometimes in the vertical position and again inclines backward to a varying degree until there is present a retroversion. There is some justification in regarding the latter when existing uncomplicated as a reversion of type or morphologic arrest and not an abnormality. It is well known that in intrauterine life the uterus still maintains the vertical position in the eighth month and that in apes retroversion is a normal condition.

The syndrome of hysteria is fixed and definite and includes motor, sensory, psychic and somatic phenomena. The motor symptoms of hysteria, the palsies, contractures, tremors and incoordination, are not misleading and are naturally referred to their nervous origin. Some of the sensory phenomena also, such as the anesthesia, hypesthesias and alterations of temperature sense, need not be considered here. It is especially important, however, to consider in detail the various cutaneous painful areas met in hysteria, as these are of extreme interest because of their simulation of pelvic disease. Not infrequently the areas of hysterical hyperesthesia become areas of hyperalgesia and then are not only tender to touch, but spontaneously painful. They bear no relation whatever to sensory nerve distribution or segmental representation in the cord, which fact at once stamps them as cortical or psychic in origin. These areas of hyperesthesia are sometimes found on both sides of the body, though they are most frequently found on one side only, usually the left. These painful areas are most varied in extent and distribution, but as a matter of clinical observation they seek by preference certain localities, especially the inguinal region. On account of the anatomic relation which the ovary bears to the inguinal region, the true significance of these painful areas has been greatly misunderstood, and as a result these areas have been misnamed areas of "ovarian tenderness." As to the incorrectness of this term there can be no doubt, as these areas are often observed in men as well as in women in whom the ovaries have been removed. These areas are usually superficial, but occasionally there are cases in which the pain is deep seated, just as in some cases of spinal tenderness or of clavus hystericus of the head; but even in these the pain can be demonstrated to exist in the abdominal wall. The method adopted to demonstrate these areas is as follows: After the painful area has been carefully located on the abdominal wall, the tip of the forefinger of the right hand is allowed to rest lightly on it; the forefinger of the left hand is then introduced into the vagina and directed upward, to one side or the other, until its tip is immediately below its fellow of the right hand which is on the abdominal wall. Just as soon as pressure is made between the two fingers, the patient flinches, which does not occur when pressure is made in other directions, or when other portions of the abdominal walls are included. This hysterical inguinal pain has been compared to the boring and penetrating pain of clavus hystericus, the name used when the area is located in the tissues of the scalp. The so-called "inframammary" tenderness is a painful area usually located under the left breast; it is sometimes found, however, in the same situation on the right side, either alone or in conjunction with the area upon the left side. This pain is often very intense in character; occasionally it centers in the nipple and then gives rise to so-called mastodynia. Other painful areas are occasionally found above the spines of the scapulæ, to the sides of the cervical, dorsal and lumbar spines, over the sacrum and at the tip of the coccyx, giving rise to so-called coccygodynia. The hyperalgesic areas may be found on the mucous surfaces of the vulva, vagina, rectum, bladder, nose and tongue. They are usually most distressing in character and give rise to intense suffering, especially when located in the vagina and rectum. Under such conditions sexual intercourse becomes impossible and bowel movements become agonizing.

The concomitant existence of somatic symptoms of hysteria, such as globus hystericus, hysterical vomiting and anorexia, amblyopia, contracture of the visual fields and like phenomena are, of course, strong corroborative evidence. Among other somatic disturbances of hysteria we find fever, cough, disturbances of the heart's action, of the general circulation, of digestion, of loss of voice, phantom tumors and like obscure phenomena.

The psychic phenomena of hysteria are of great interest and are not difficult of recognition when we bear in mind that the evidence of disturbed mental balance is always present. Emotional inhibition is defective and phases of exaltation and depression are present without adequate cause. The hysterical subject reacts inordinately to suggestion. In health organic and visceral sensations do not enter into the makeup of consciousness. In hysteria, however, these sensations present themselves in an illusional form and are wrongly interpreted. The pain in the groins suggests to the patient grave pelvic disease or appendicitis; the "inframammary tenderness" suggests serious disease of the breast. The abnormal reactions of the patient to the suggestions furnished by her own body are but exceeded by the reactions which ensue upon suggestions from without, that is, suggestions furnished inadvertently by physicians, nurses and relatives. Hysterical stigmata, when in abeyance, are often developed by incautious statements. Therefore, under such circumstances, a pelvic examination should never be made without unmistakable indications. For, even independent of the moral shock, a fixed belief is engendered in the patient that she is the victim of some grave and mysterious disease to which she attributes all her symptoms. In hysteria the basic condition consists in a degree of suggestibility that is pathologic, and it can be readily understood that in such a soil almost any nosophobic ideas can be developed.

ANALYSIS OF CASES

In keeping with the above considerations, an analysis of 591 cases presenting themselves in both clinical and private practice will prove interesting and instructive. Of this number 179 cases were excluded because they bore no direct relation to the matter in hand. They consisted of pregnancies, miscarriages, venereal diseases and unimportant affections. In the normal pelvic conditions all non-inflammatory affections were excluded, such as lacerations, anteflexions, retropositions embracing the retroversions, retroflexions and anteflexions retroposed.

STATISTICS

Table 1.—Hysterical or neurasthenic phenomena or both were found in cases presenting the following conditions:

	No. Cases.
Pelvic organs entirely normal	181
Tubo-ovarian inflammations and exudates	34
Fibroid growths	4
Cervical and perineal lacerations	21
Dysmenorrhea	23
Anteflexions	28
Retropositions	36
Splanchnoptosis (relaxation of uterine supports)	3
Lacerations that were repaired	2
Where both ovaries had been removed	9
Where one ovary had been removed	2
Where the appendix had been removed	4

Table 2.—Hysterical or neurasthenic phenomena were absent in cases presenting the following conditions:

	No. Cases.
Cystic degeneration of the cervix	3
Tubo-ovarian inflammations and exudates	53
Fibroid growths, including one weighing 17 pounds	11
Cervical and perineal lacerations	39
Dysmenorrhea	7
Anteflexions	24
Retropositions	44
Splanchnoptosis (relaxation of uterine supports)	19
Carcinoma (no nervous symptoms found in any case of carcinoma)	9

Table 3.—The painful cutaneous areas of hysteria present in absolutely normal pelvic conditions were as follows:

	No. Cases.
Both groins (so-called ovarian tenderness)	70
Left groin (so-called ovarian *tenderness*)	40
Right groin (so-called ovarian tenderness)	20
Under both breasts (inframammary tenderness)	2
Under left breast (inframammary tenderness)	26
Under right breast (inframammary tenderness)	1
On either side of the spine in the cervical region	3
On either side of the spine in the dorsal region	14
On either side of the spine in the lumbar region	9
Over the sacrum	14
At the end of the coccyx	10
Above the spines of the scapulæ	4
Clávus hystericus	5
Deep intrapelvic pain (hysterical)	10
Painful areas on mucous surfaces, vagina, vulva, rectum and tongue	4
Hysterical vomiting	3
Hysterical pain in one eye during menstruation	1
Hysterical globus	9

The other nervous phenomena present in absolutely normal pelvic conditions were as follows:

	No. Cases.
Limbache (legs, thighs, arms and shoulders)	40
Sacral backache	60
Dorsal backache	2
Headaches, vertical	3
Headaches, diffuse	6
Headaches, frontal and occipital	35
Headaches, occipital	26
Headaches, frontal	16
Disturbed sleep	18
Insomnia	3
Gastrointestinal disturbances of nervous origin, such as constipation, flatus, gastric distress, diminished secretions and anorexia	96

Table 4.—Painful areas found in pelvic diseases were as follows:

	No. Cases.
Both groins (so-called ovarian tenderness)	14
Right groin (so-called ovarian tenderness)	3
Left groin (so-called ovarian tenderness)	14
Under left breast (inframammary tenderness)	2
On either side of the spine in the cervical region	1
On either side of the spine in the dorsal region	2
On either side of the spine in the lumbar region	4
Clavus hystericus	3
Over the sacrum	3
At the end of the coccyx	2

The other nervous phenomena present in pelvic disease were as follows:

	No. Cases.
Limbache (legs, arms, thighs and shoulders)	3
Sacral backache	10
Lumbar backache	7
Headaches (frontal and occipital)	3
Headaches (frontal)	3
Headaches (occipital)	5
Headaches (diffuse)	2
Gastrointestinal disturbances of nervous origin such as constipation, flatus, gastric distress, diminished secretions and anorexia	12
Disturbed sleep	5

The above tables speak for themselves; there is obviously no relation between hystérical stigmata and pelvic disease; this is likewise true of the symptoms of neurasthenia. That hysteria and neurasthenia can coexist with pelvic disease goes without saying, just as they may coexist with a brain tumor or a broken leg. The above statistics do not even show that neurasthenia or hysteria exist as frequently in pelvic diseases as in other visceral affections. Certainly the above facts prove that operations on the pelvic and other viscera for the relief of nervous symptoms have no justification. It is perfectly clear that no operation should be performed which has no positive surgical indications. When this subject is fully understood the fastening up of so-called loose kidneys, the removal of normal ovaries and tubes, of normal uteri, of normal appendices, of pieces of normal coccygeal bone, will cease, as will also repair of trivial cervical lacerations. A careful examination of the records from hospital laboratories will abundantly testify to this assertion of the removal of normal organs.

NECESSITY FOR CAUTION WITH REGARD TO SURGICAL TREATMENT

In looking over the above tables it will be seen that there are more retropositions of the uterus without nervous symptoms than retropositions existing with them. It is the same when we compare the anteflexions, the lacerations, the splanchnoptoses and malignant disease. Dysmenorrhea is most striking in that the tables show in almost every case symptoms of functional nervous disorders associated with it, suggesting that dysmenorrhea in many instances is but one of the many phenomena of these nervous affections. This view would greatly reduce the number of dilatations which are regarded by some as useless, senseless and cruel except for diagnostic purposes. Uncomplicated retroversion requires no surgical or medical interference and presents practically no symptoms. Lucy Waite and Byron Robinson of Chicago experimented on the cadaver by injecting air into the bladder and rectum, and they demonstrated an extensive deviation or variation of position regarding the uterus. Anatomically and physiologically the uterus is a mobile pelvic organ and not an abdominal one, and to force it upward and forward, to stitch it to the abdominal wall, compromises it in its function, circulation and nerve supply, substituting one pathologic state for another.

A word as to Alexander's operation. Byron Robinson and others maintain that it is an unnecessary, harmful and unnatural operation and should become obsolete. The round ligaments do not support the uterus and can be but forced substitutes, that is, pathologic. They are found relaxed when the abdomen is opened. If they are forced into assuming the function of supports of the uterus they will elongate and a patient will require an Alexander operation "about as frequently as a man will need his hair clipped." He claims that it is a cosmetic operation at high risk and cost to the patient. Frank H. Hancock[1] finds that 26 per cent. of gynecologic patients have retroversions and proposes that they be all corrected by hysteropexy. Byron Robinson[2] of Chicago asserts, in answer to Dr. Hancock's article, that such bids for surgery tend to "scalpel storms." He further says that "surgeons have gone mad, diagnosis and medical treatment are becoming buried, obscured in surgical technic. The postmortem is useless, forsooth, because diagnosis must be made in the living by abdominal incision and direct vision. The mechanical surgeon has arrived with his commercial tool-chest, the cutter with his 'scalpel storms' is multiplying rapidly, surgery is becoming a by-word, the 'pexyite' is abroad in the land, the suspicion of the people is beginning to arise from the slaughter of the mechanical surgeon. Irrational surgery is debased surgery, a misapplication of the art. Unnecessary surgery is criminal, harmful surgery; it injures both patient and physician and creates misery. Because a woman becomes well subsequent to a gynecologic operation without positive surgical indications affords no proof whatever that she required it."

No one will deny, however, that when the uterus is dislocated, that is, fixed by adhesions, surgical means should be employed to loosen it after medical measures have failed, but it should not be subjected to a new dislocation by fastening it to the abdominal wall. The pelvic floor should always be repaired when lacerated, as it is so intimately connected with the support of the uterus. In all inflammatory conditions of the pelvic organs, such as exudates, endocervicitis, endometritis, metritis and prolapsed tubes and ovaries, induction of hyperemia, that is, a fresh supply of blood to the parts, presents the only means of cure. This hyperemia can be induced in no better way than by means of the hot douche frequently repeated, glycerin tampons, hygroscopy, electricity, menstruation and gestation.

It has been frequently stated as a truism that a gynecologist should be first of all a wise physician. From a close observation and study of these tables "gynecologist" should be further interpreted as "one skilled in functional nervous disorders," for the gynecologic clinic of to day is largely neurologic. How imperfectly the neuroses are understood is best illustrated by a casual remark made by one of our foremost gynecologic teachers that a wandering pain was a hysterical pain, and a fixed pain was one indicative of organic disease. How far he was from a realization of the truth may be conceived from the fact that hysterical pain is often so fixed in character that even the psychic impress made on the cerebral cortex by the removal of pelvic organs, normal or diseased, does not alter it in the slightest degree, but often makes it more fixed than ever. A prediction from a study of these cases would not be out of order in reference to the gynecologist of the future when he has grasped the neurologic simulation of pelvic disease. His greatest endeavor will be to have the fewest operations to his credit instead of the greatest number. The conservation of normal pelvic organs and the restoration to health of diseased ones by medical means whenever possible will be his highest aim.

810 North Broad Street.

CANCER OF THE UTERUS

OUR PRESENT MEANS OF LESSENING ITS MORTALITY *

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The question of lessening the mortality in cancer of the uterus is a subject which ought to be of interest to every member of the profession, since, as has been shown by the painstaking statistics of Welch, cancer of the uterus ranks first in incidence when primary carcinoma is considered, forming practically one-third of all the primary cases. The frequency of its occurrence can well be shown by a concrete example. According to Kelly, of the first 11.382 patients admitted to the gynecologic service of the Johns Hopkins Hospital in fifteen years for all gynecologic affections, 412, or 3.06 per cent., were cases of cancer of the cervix. Crile, in his oration before the American Medical Association at Chicago in 1908, states that statistics show that one woman in every eight who reaches her thirty-fifth year dies of cancer, and that, taking the prevalence estimate of the British Isles and applying it to the United States, there must be at this present moment approximately 80,000 cases of cancer in this country alone. These figures, of course, include cancer of all organs, but, as I have said before, uterine cancer easily heads the list in frequency. This is the condition which is confronting the race, and the question arises what we have done and what we can do to prevent its mortality, which in untreated patients is 100 per cent. Of course, we ultimately hope to find the cause of the disease and so attack it at its source, and to this end thousands of dollars are being expended in careful and painstaking investigation, and through munificent benefactions the services of some of the keenest minds in medicine are engaged in research along this line. But so far we may say, in all candor, that the results have been from a practical standpoint universally disappointing. For the present the cause of cancer is as far from a solution as it was years ago, but we must be optimistic and trust to the future for its solution, since many as seemingly impossible problems have been conquered in the past.

At the present time, then, we are concerned with the enormous prevalence of the disease, while we are still in the dark as to its cause. Such being the case, there can be no real prophylaxis. As we can not prevent its incidence, let us turn to methods of combating its ravages—to its cure. I think I am justified in saying that no well-balanced, open mind doubts that the only cure of cancer of the uterus in our hands to-day lies in its complete extirpation by surgical means. It seems to be the judgment of the majority that all other lines of treatment, whether by serums, trypsin, or escharotic pastes, etc., are merely palliative. Turning, then, to the surgical methods of cure, we again find opinion focusing on a single method. In the early days amputation of the cervix was advised and practiced; later vaginal hysterectomy had its day. Following this came pan-hysterectomy by the abdominal route in order to remove the parametrium more completely; and then came the methods of Clarke, of Philadelphia, and Sampson, of Baltimore, in this country, and Wertheim in Germany, who were all working along the same lines, these lines being the application to cancer of the uterus of the surgical principles developed by Halsted in the cure of cancer of the breast, namely, the excision of the growth *en masse* together with those lymphatic nodes that anatomically drain the area affected, and the excision of these nodes, whether they were macroscopically involved or not.

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[1] A Plea for the Correction of Uterine Displacements, Med Rec., New York, March 7, 1908.

[2] Uterine Displacements, Med Rec., New York, April 11, 1908.

* Read before the Maine Medical Association, at its fifty-sixth annual meeting, Bangor, June 10-15, 1908.

I will not enter here into a discussion of the merits or of the necessity of these latter more radical procedures, as their details are of purely surgical interest and as such must be decided on by specialists in that line. One thing, however, is certain, that nothing more radical than the procedures of Clarke, Sampson and Wertheim can be conceived of. Modern surgery has done its best, and our only present hope of cure has reached its limit. If better results are to be obtained, surgery must rely on some outside ally. What, then, are the results of these surgical procedures?

In this country various operators report cures, over the three-year period, of from 5 to 8 per cent. or less. Contrast this with the statistics of Wertheim,[1] who there reports a percentage of cure of 22.5 per cent. of all patients seen. Surely the surgical ability of Wertheim is not sufficient to explain this discrepancy of results. The explanation lies in the fact that he sees his cases in an earlier stage than do the operators in this country, and herein lies the secret of his success. If 22.5 per cent. of all patients seen were cured after three years, cancer of the uterus would be practically only as fatal as pneumonia—a surely remarkable result.

We cure cancer of the lip in practically 90 per cent. of the cases. Why? Simply because we see it in its incipiency—in many cases, in fact, in the so-called precancerous stage. Under these conditions the surgeon is triumphant in practically every case. As Crile says, "Halsted quotes the elder Gross—and Gross was the first surgeon of his day—as stating that he had never cured a case of cancer of the breast. Halsted, however, developed this field by applying a perfected technic to a correct pathologist's conception, and his work serves as a general model for cancer operations.

"In the Johns Hopkins clinic 47 per cent of all patients with breast cancer operated on have remained well for three years or more. Considering only the cases that seemed at the time of operation to be clinically favorable, seventy-five out of every hundred were cured. A group of cases still more impressive is that consisting of those in which a clinical diagnosis of cancer could not be made prior to operation. Of these, 96 per cent. remained well for three years or more." I will not multiply instances, but these figures will illustrate my proposition that surgery plus, and always plus, an early diagnosis will give a high percentage of cures in malignant disease.

Coming back, now, to cancer of the cervix, we are met by an entirely different array of figures. Taking again the statistics of the Johns Hopkins Hospital as a concrete example, we find that of the cases which present themselves to this hospital over 70 per cent. have reached such a stage of development that no operation, save possibly a palliative curettage, can be considered; yet in over 60 per cent. (more than half) of these patients a history can be elicited that should have sent the woman to her family physician for advice, and this history has extended throughout a period of six months or more. Here lies at the present time our main point of attack. An effort must be made to bring these patients to the surgeon before the disease has reached an inoperable stage. The difficulty lies in the fact that in the majority of cases of cancer of the cervix the earliest symptoms begin to be manifest about the time of the menopause, and the earliest symptoms of cancer of the cervix are not pain or profuse hemorrhage, many text-books to the contrary notwithstanding. The earliest symptoms are most insidious, a thin watery discharge, a slight change in the character of the leucorrhea, with perhaps now and then a mere "show" of blood. The danger lies in the fact that these symptoms occur about the time of the menopause, and that most women, and not a few practitioners, have had inculcated into their minds the belief that at this time all sorts of irregularities in the vaginal discharge occur and are of no significance. The woman consults her elder neighbor and is reassured; she in many cases consults her family doctor and is again reassured that such changes mean nothing and that in the course of a few months all will be well. In many cases this will be so, but in the meantime those cases in which the changes are due to incipient malignant disease will have passed into the inoperable stage and the only hope of salvation will have been lost.

Our present hope lies entirely in the hands of the general practitioner. He must start a campaign of education among the women of his clientele. All women approaching the cancer age have, as a rule, some physician to whom they look for advice and who occupies to them the position of "father confessor" in all medical affairs. If the family doctor will impress on these women the necessity, as they approach the menopause, of reporting to him any changes in the character of their vaginal discharge; if he will then go to the point of impressing on his patients the value of a routine vaginal examination at least once in every six months in women between the age of 35 and 55, whether they have any symptoms or not, the statistics of operable cancer of the cervix will take their place along with those of cancer of the breast. Cancer of the cervix does not differ in its biology from cancer on the visible surfaces of the body, and could it be seen in the same stage of its development it would be just as amenable to surgical cure.

Another point which I wish to make is the necessity of the doctor considering as serious all disturbances of menstruation occurring in the cancer age. The woman is doubtless, through ignorance or misinformation, often at fault in neglecting early signs, but too often, I fear, the doctor himself is negligent. The physician should make it an iron-clad rule to insist, and insist absolutely, on not only a thorough vaginal examination, but on a visual inspection of the uterine cervix in all such cases on the occasion of the first consultation. If the inspection of the cervix shows the least suspicious sign, a piece of tissue should be removed for microscopic examination, and this may, and in most cases should, be performed without allowing the woman to know what has been done. If the woman is informed that the doctor desires to remove a portion of the uterus for pathologic examination, the offer will be almost invariably declined. The cervix is practically devoid of sensation. At the first examination, under the guise of an ordinary treatment, the cervix may be grasped lightly with a volsellum and a wedge-shaped piece of the suspected area removed with a couple of snips of the scissors without giving any more pain or discomfort than the ordinary cervical application would incur.

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[1] Wien. klin. Wchnschr., 1904, xvii, 783.

The aid of the microscope can then be invoked and the patient treated as the results of this examination dictate. The hemorrhage following this procedure is always slight, can usually be left to the control of a vaginal pack, and at most will require one suture for its control. This is the only salvation for these sufferers—to obtain a microscopic diagnosis in the very early stages and in what might be called the precancerous stage.

In general terms it may be stated that a cancer of the cervix that can be diagnosed unhesitatingly as such by the touch, the eye or history, has progressed to the border-line between possibility and impossibility of cure. It is only by the use of the microscope in the very early stages that we can hope to enlarge our percentage of favorable cases materially. I have dwelt especially on cancer of the uterine cervix because of its much greater frequency, but all of these remarks have equal application to cancer of the uterine body. Here, even more, if possible, than in cancer of the cervix, must we rely on the obtaining of uterine curettings for an absolute diagnosis, a procedure which requires only a light primary ether, gas or ethyl chlorid anesthesia for its successful performance.

That a campaign of education can be made to produce results is proved by the experience of Winter, of Königsburg, whose results are not as well known as their importance deserves. In 1902 he undertook to improve his results in cancer of the uterus by publishing a series of pamphlets on the early signs and symptoms of uterine cancer, distributing these not only to the physicians of East Prussia, but also in popular style to the laity at large. As a result, in one year his cases suitable for operation increased from 62 to 74 per cent.; after the instructions were issued, 90 per cent. of the patients applied for treatment within two weeks after first seeing their family physician. The number of cases seen within six months was reduced from 12 to 5 per cent.; cases seen within nine months, from 18 to 5 per cent., and in those cases in which symptoms had lasted a year the decrease was from 12 per cent. to none at all! With these statistics as a proof of what can be accomplished by one man in a year's time, certainly we should be optimistic as to the result of a general campaign of the profession along these lines.

RECAPITULATION

1. Complete surgical extirpation is at the present time our only method for the cure of cancer of the uterus, but the percentage of cures is much below what it might be made.

2. Our present means for lessening the mortality lie in a campaign of education, directed, first, to the general public by the family physician, so that the patient will not neglect to consult him on the occurrence of unusual symptoms, and, second, to the family physician himself, to the end that he may realize that every case of disturbance of the vaginal discharge at or about the time of the menopause is most significant and suspicious. We should emphasize also not only the necessity, but the ease of obtaining sufficient tissue for a microscopic diagnosis in every remotely suspicious case at the time of the first consultation and without the employment of any anesthetic. This idea has been so well epitomized by Kelly that I will close in his words:

> There can be no doubt that the most important agent in the instruction of the public is the general practitioner. Almost all women, and married women especially, have a more or less intimate acquaintance with some physician with whom they converse at one time or another on the subject of their own health or that of their relatives, and in whose opinion they place great confidence. If every family physician would make it a point to take advantage of the opportunities afforded him by such relations to point out the significance of hemorrhage, vaginal discharge and pelvic pain occurring about the time of the menopause, he would accomplish more toward diminishing the death rate of cancer than can be done by any means we can command at present. Every woman who has borne children should be examined by a competent physician at least once every year until she is fifty-five years old. The effect of an adoption of these rules would be prompt discovery of an enormous number of cancer cases in their very incipiency. That such a course would be distasteful to women at large, I do not doubt, but drastic measures are often necessary to purge ill humors, and who would measure such a trifling sacrifice against the great gain of even a small increase in the percentage of operability of this distressing and to-day largely hopeless class of cases?

622 Congress Street.

THE ROENTGEN RAYS AS AN AID IN THE DIAGNOSIS OF CARCINOMA OF THE STOMACH

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Since "35 per cent. of all visceral carcinomata are found in the stomach,"[1] and since surgeons believe that if this disease is recognized early many lives can be saved or prolonged, it behooves us to bring to our aid every means that will assist in making the diagnosis.

From time to time new methods have been added, each claiming superiority over the others and giving us a sense of exactness and certainty. As time passes, the results of each new method are found to have so many exceptions or possible errors that we are likely to go to the other extreme and cast each aside as useless, to grasp at something new. This may also be the fate of this latest and, apparently, most valuable and exact means at our command. I can already see many possible errors, and, unless the work is done thoroughly and most carefully and performed by an expert, or at least by one who is cautious and not too ready to jump at conclusions, it, too, is bound to fall into discredit.

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[1] Virchow, quoted by Rodman; Surgery, Gynecology and Obstetrics, June, 1908.

We shall be on safe ground if we look on this method as an aid only, and combine with the results from its use all the information that may be obtained by other methods of investigation.

True, the exploratory operation is probably the final means of exact diagnosis, but who is willing to submit to this method of investigation until all others have been exhausted?

Holzknecht and Jonas[2] have been the most faithful and thorough investigators that have yet made records in this new field of Roentgen diagnosis of carcinoma of the stomach. Their studies followed and were made possible by Rieder's masterly work[3] in the study of the size, shape, movements and position of the stomach.

IMPORTANCE OF USING BOTH THE PLATE AND THE SCREEN

In the investigation of the stomach for carcinoma probably the most valuable evidence is obtained on the fluorescent screen. By it we recognize the moving food, the moving stomach walls, and the constant variations during the process of filling, which are impossible by any other means. On the other hand, the plate will serve to record permanently and accurately the pathologic findings at each step, and will demonstrate finer detail than can possibly be seen on the screen. Therefore, both Roentgenoscopy and Roentgenography should be used in each case. This will, of course, double the time and expense, but no case is thoroughly studied without the use of both methods.

The serious objection to the use of the fluorescent screen is the danger to the operator. Ten men in this country have already sacrificed their lives through this exposure. It is doubtful whether we can eliminate all danger, but certainly all the protection possible should be provided, or fluoroscopy would be better omitted.

Much unnecessary exposure can be eliminated by making a thorough clinical study previous to the Roentgen examination. For this reason the Roentgenologist should be given all the clinical data, so that he may concentrate his attention on the affected region. Often patients and occasionally physicians expect us to look through the patient, as one would look through a window-pane, and see all that is within the integument. For instance, patients are sent because they have pain in the abdomen, with no other clinical data. Then we must hurriedly guess whether the stomach, the gall bladder, the kidney, the bladder or the intestines are most likely at fault and proceed accordingly in making our examination; for the technic for each of these organs is different, and we are likely to obscure the one while examining the other.

DATA FORMING THE BASIS OF THIS PAPER

The data forming the basis of this paper have been obtained from a study of twenty-eight cases in which evidence of carcinoma was clearly demonstrable, and in most of which this diagnosis was confirmed by operation, autopsy or the subsequent clinical course.

It is true that in most instances the disease was well advanced and the clinical evidence of carcinoma fairly strong, but in the majority of cases the tumor was not defined or at all palpable, and in all cases it served definitely to locate the disease and more or less indicate its extent.

This work is still in its infancy and we must collect evidence for the present from all cases, but I feel that later we should be able to make earlier diagnoses, for the evidence shown late should be present to a sufficient degree rather early.

EVIDENCES OF CARCINOMA

The evidences of carcinoma of the stomach may usually be classed as changes in the course of the food through the stomach, or as changes in outline, position, peristaltic movements, or in the mobility of the stomach.

1. *Abnormal Course of the Food.*—The course of the food is probably best studied by watching the first swallow, and for this part of the examination a tablespoonful of a mixture of bismuth subcarbonate and water may best be used. This is then watched carefully as it passes from the upper to the lower pole. To recognize the evidence afforded by this means one must first be familiar with the normal course of the food and the possible changes in the course due to other conditions than carcinoma. Briefly stated, it curves about two inches to the left of the median line and takes the shape of a funnel in the upper third of the stomach, with the point downward, and a small collection of gas (usually swallowed air) under the dome of the diaphragm. From the point of this funnel it moves downward, usually in a straight or only slightly curved line, to the lower pole, which may be located anywhere between two inches above the umbilicus and the crest of the pubes.

When carcinoma is present between the upper and the lower pole of the stomach the food is likely to take an irregular course, as if curving around an obstruction, just as the rivulet curves around a rock. This is best seen when the walls are in contact. When the walls are relaxed or widely separated, as in some advanced cases of gastroptosis, the food drops suddenly from the upper to the lower pole as in an open sack.

Here we must avoid errors, for occasionally extra ventricular conditions, such as a distended kunckle of intestine or the pressure of a tumor from the outside, may also change the course. These, I believe, can usually be differentiated by various manifestations, depending on the ingenuity of the examiner in each case.

This first portion of food can then be watched at the lower pole, as the peristaltic waves carry it forward. Then the stomach should be further distended and the course watched. This evidence can, of course, be obtained only on the screen, and I consider it very valuable.

2. *Gross Obstruction to the Passage of Food.*—This is best illustrated in an hour-glass contraction of the stomach. This is usually evidence of advanced disease, though it may at times be found before palpable signs are present, and even before the symptoms are definite.

Such obstruction can be observed on the screen, and the degree of obstruction can be estimated by finding the size of the smallest portion of food that can not pass. For this purpose I use pills or capsules of bismuth of various sizes, but these pills should be used only after one has observed the degree of delay to the passage of bismuth and water and then the thicker liquid of bismuth and kephir.

One must be cautious in diagnosing hour-glass contraction. There is normally a delay of several minutes

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[2] Die Radiologische Diagnostik der Intra- und Extraventrikularen Tumoren. Moritz Perles, Vienna, 1908

[3] Fortschr. a. d. Geb. d. Roentgenstrahlen, Feb. 14, 1905.

at the juncture of the upper and the middle third of the stomach. Gross obstruction can not be diagnosed, therefore, until the stomach has been fully distended and until an attempt has been made to crowd food by massage and abdominal contraction from the one segment into the other. Here again, particularly in the middle of the stomach, a distended colon may produce a marked indentation and by intra-abdominal pressure cause considerable delay to the passage of food.

3. *Localized or General Diminution of the Stomach Shadow.*—This diminution of the stomach shadow is usually localized and will be most often found at the pyloric end. There is, in addition, usually some irregularity in shape. Such diminution may at times be seen only when the stomach is partially filled or, again, when nearly empty. This can be understood when one considers that if the tumor occupies either the anterior or the posterior wall without affecting the lesser or the greater curvature, the evidence of obstruction or diminution of shadow would be seen only at a certain stage during which the opposite wall is in contact with the tumor. After the stomach is fully distended a sufficient layer of bismuth will overlie the tumor and obliterate the differentiation.

When such evidence is first observed, while the stomach is partially filled, an attempt should be made to carry food into the affected area by massage. If this is impossible the evidence becomes stronger.

4. *Abnormal Contour.*—Anywhere along the greater or the lesser curvature there may be a tumor. This would ordinarily cause an indentation in the shadow cast by the bismuth contents of the stomach. Such indentation should first be observed on the screen. It should be constant and not obliterated by massage or peristaltic action or respiratory movements. It should then be recorded on the plate, where finer detail and, at times, the indentations of the growth itself may be observed. In order to make such a fine detailed record the exposure must be made in a few seconds, usually under five, so as to eliminate the effect of respiratory and peristaltic movement. Such short exposures require powerful currents, and powerful currents burn up tubes very rapidly, thus decidedly increasing the expense.

We must avoid the error of interpreting an indentation into the gastric shadow as carcinoma when produced only by a distended knuckle of intestine. Such indentation is smooth and is usually found on the greater curvature at about its middle or upper portion.

So, too, a strong and slowly moving peristaltic wave, if not observed on the screen and seen only in one plate, may lead to an error. When in doubt, the examination should be repeated.

5. *Interference with the Peristaltic Wave.* — Peristaltic waves in general are plainly observed only in the lower third of the stomach, and best when the stomach is only partially filled or, again, when nearly empty. Their depth and frequency vary considerably in different individuals. They serve as evidence of carcinoma when they are plainly visible and are seen to stop at a certain point either on the greater or the lesser curvature. The evidence becomes stronger if they can be seen to begin again further along on the border of the stomach.

6. *Abnormal Position or Immobility of the Stomach.*—The stomach may be drawn by adhesions or crowded out of its normal position by the tumor mass. Adhesions may even twist the stomach so as to divide it into two distinct portions and give the effect of an hour-glass contraction. Such effect was observed in a case of Dr. Rodman's, in which it took the bismuth-kephir mixture nearly half an hour to pass from the upper to the lower segment of the stomach. The stomach itself was a very large one, so that the lower pole extended nearly to the pubes. The carcinoma was found on the lesser curvature, near the pylorus, with adhesions to the liver higher up, which twisted the stomach and divided it near its middle.

Adhesions below or anteriorly will render the stomach less mobile, but one must bear in mind that with large stomachs and relaxed abdominal walls, the mobility is not great. I usually depend on abdominal contractions to move the stomach, though pressure with the hand may be used. Such evidence is best obtained on the screen, but some evidence may be obtained by plates, if one takes a postero-anterior view with the patient in the erect posture and an antero-posterior view with the patient in the supine posture (lying on the back).

7. *Abnormal Evacuation.*—In two cases I have observed the stomach contents passing directly into the duodenum almost as fast as they entered at the cardia. This I interpreted as being due to a patulous pylorus. I believed that induration of the walls of the stomach prevented the pylorus from contracting and closing the orifice. One patient (Dr. Daland's) died in a few months with all the characteristic symptoms of gastric carcinoma, but there was neither an exploratory operation nor an autopsy. The other patient (Dr. Anders'[4]) was operated on by Dr. Rodman, confirming in every particular the Roentgenologic findings.

There may also be great delay in the evacuation of the stomach due to pyloric stenosis. Here again we must be cautious, for I have observed, in cases of marked gastroptosis in which there was no pyloric stenosis, retention of food as long as eleven hours. Retention of food can be interpreted as due to carcinoma only when it is combined with other evidence, both clinical and Roentgenologic. Generally the food should be followed through the bowel to detect other possible involvement, due either to malignant disease or adhesions.

GENERAL TECHNIC

The technic can be given only in a general way, for in the study of a case one step leads to another and good results will often depend on the ingenuity of the operator.

1. *Position of the Patient.*—This will, of course, vary much with the individual patient, and several positions are often necessary to confirm or to demonstrate more clearly. Generally the standing posture, with the abdomen against the plate or screen, will give the most evidence, probably because in this position the stomach is more stretched out, and because we can best watch the passage of the food, which is conveyed downward both by gravity and peristaltic action.

A position with the patient lying on the abdomen for postero-anterior view will probably be the next most valuable. Then one can easily, with the patient either in the erect or recumbent posture, change to the oblique or posterior views.

2. *The Bismuth Mixture.*—At the very beginning of the examination it is usually best to use a tablespoonful of a mixture of bismuth and water. This will give the greatest density with the greatest fluidity, and it can,

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[4] Pennsylvania State Med. Jour., November, 1908.

therefore, be best followed in a tortuous course and into the crevices; but one must not use too much of this mixture for fear of the water becoming absorbed and leaving the bismuth in hard masses.

For general use and for further distention of the stomach I have found a mixture of bismuth and kephir (or yolak), previously described,[5] to be most serviceable, since it keeps the bismuth in almost perfect suspension and is easily digested.

The remainder of the technic, with regard to the management of the tube, the apparatus, the dress of the patient, the patient, and the plates, will be similar to that used in other abdominal examinations.

CONCLUSIONS

1. Gastric carcinoma is demonstrable when it changes the course of the food through the stomach, when it decreases the volume, interferes with peristaltic action, fixes or displaces the stomach, causes an indentation in the stomach wall, or modifies the rate of evacuation of the gastric contents.
2. I believe that with this aid a diagnosis can be made earlier than has heretofore been possible.
3. As a rule it is a tedious and expensive study, and therefore each case should be studied well first clinically.
4. Great caution and thoroughness will have to be observed, or errors will be made, and this valuable method of investigation will fall into discredit.

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A CHAPTER IN THE HISTORY OF QUACKERY

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We are likely to think that quackery is comparatively new, or at least fostered by popular education, and that unscrupulous struggle for success which is sometimes considered a characteristic of our times. I have been rather interested, however, in tracing out a series of chapters in the history of quackery which show that the methods, the ways, the motives and the character of the quack have been about the same from time immemorial, in all countries of the world. We might think, for instance, that the quack of the occident would be quite different from the quack of the orient; but much evidence—among other things, a little story in the Arabian Nights—shows how many of the characteristics of the quack persist to the farthest limits of space and time.

The Arabian Nights themselves—that is, the series of stories which we know by that name—were given a definite collective form (probably by a single writer) at some time during the fifteenth century. However that may be, the individual tales are undoubtedly of unknown antiquity and derived from widely scattered sources. Variants are found in the folklore of Egypt, Syria, the valleys of the Tigris and the Euphrates, Persia, India and even distant China and the remote center of Africa. One of them, the story of the clever thief, was retold by Herodotus nearly 500 years before Christ; and he knew that it was old in his time. It may be that some of these stories represent the oldest tales that mankind has, and that many of them come from that central plateau of Asia where very probably the human race originated. It is all the more interesting then to find among them the following characteristic story of a quack with all the traits that we know so well to-day.

THE WEAVER WHO BECAME A LEECH

Once upon a time there was a man in Persia who wedded a woman of rank higher than himself and nobler of lineage, who had no guardian to preserve her from want. She was very loath to marry one who was beneath her; yet she wed him because of need, and took of him a bond in writing to the effect that he would ever be under her order to bid and forbid and would never thwart her in word or in deed. Now the man was a weaver and he bound himself in writing to pay his wife ten thousand dirhams in case of default. After such fashion they abode a long while till one day the wife went out to fetch water and saw a leech who had spread a carpet hard by the road, whereon he had set out great store of simples and implements of medicine and he was speaking and muttering charms, while the folk flocked to him from all quarters and girt him about on every side.

The weaver's wife marveled at the largeness of the physician's fortune and said in herself, "Were my husband such a one he would lead an easy life and that wherein we are of straightness and poverty would be widened to him."

When she went home she said to her husband, "Verily my breast is narrowed by reason of thee and of the very goodness of thine intent; narrow means suit me not, and thou in thy present craft gainest naught; so either do thou seek out a business other than this or pay me my rightful due and let me wend my ways."

Her husband chid her for this and advised her to take patience; but she would not be turned from her design and said to him, "Go forth and watch yonder physician how he doth and learn from him what he saith." Said he, "Let not thy heart be troubled; I will go every day to the session of the leech."

So he began resorting daily to the physician and committing to memory his answers and his jargon.

Then he returned to his wife and said to her, "I have stored up the physician's sayings in memory and have mastered his manner of muttering and diagnoses and prescribing remedies, and I wot by heart the names of the medicines and of all the diseases, and there abideth of thy bidding naught undone; so what dost thou command me now to do?"

Quoth she, "Leave the loom and open thyself a leech's shop."

"But," quoth he, "my fellow-townsmen know me and this affair will not profit me, save in a land of strangerhood; so come, let us go out from this city and get us to a foreign land and there live."

And she said, "Do whatso thou wilt."

Accordingly, he arose and taking his weaving gear sold it and bought with the price drugs and simples and wrought himself a carpet with which they set out and journeyed to a village, where they took up their abode. Then the man fell to going round about the hamlets and villages and outskirts of towns, after donning leech's dress, and he began to make much gain. Their affairs prospered and their circumstances bettered; wherefore they praised Allah for their present ease. In this way they lived and wandered from country to country, sojourning for awhile in one town and another, till they came to the land of the Romans and alighted down in the city thereof wherein was Galen the wise physician; but the weaver knew him not. So he fared forth, as was his wont, in quest of a place where the folk might be gathered together, and hired the courtyard of Galen himself. There he laid his carpet, and spreading out on it his simples and instruments of medicine, praised himself and his skill and claimed a cleverness such as none but he might claim.

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[5] 5. Physiologic and Clinical Observations of the Alimentary Canal by Means of the Roentgen Rays, The Journal A. M. A., Dec. 21, 1907, XLIX, 2069.

Galen heard that which he affirmed of his understanding, and it was certified unto him and established in his mind that the man was a skilled leech of the leeches of the Persians, and he said in himself, "Unless he had confidence in his knowledge and were minded to confront me and contend with me, he had not sought the very door of my house, neither had he spoken that which he hath spoken."

And care and doubt got hold on Galen; so he drew near the weaver and addressed himself to see how his doings should end, while the folk began to flock to him and describe to him their ailments, and he would answer them thereof, hitting the mark one while and missing it another while, so that naught appeared to Galen of his fashion whereby his mind might be assured that he had justly estimated his skill.

Presently up came a woman, and when the weaver saw her afar off he said to her, "Is not your husband a Jew and is not his ailment flatulence?" "Yes," replied the woman, and the folk marveled at this; wherefore the man was magnified in the eyes of Galen, for that he heard speech such as was not of usage of doctors.

Then the woman asked, "What is the remedy?" and the weaver answered, "Bring the honorarium."

So she paid him a dirham and he gave her medicines contrary to that ailment and such as would only aggravate the complaint. When Galen saw what appeared to him proof of the man's incapacity he turned to his disciples and pupils and bade them fetch the mock doctor, with all his gear and rugs; and accordingly they brought him without stay or delay. When Galen saw the weaver he asked, "What drove thee to do that which thou dost?"

So the weaver acquainted the wise Galen with his adventure, especially with the marriage settlement, and the obligation by which he was bound with regard to his wife, whereat the sage marveled.

Then he entreated the weaver with kindness and took him apart and said to him, "Expound to me whence thou knewest that the woman was from a man, and he a stranger and Jew, and that his ailment was flatulence?"

The weaver replied, "'Tis well. Thou must know that we people of Persia are skilled in physiognomy, and I saw the woman to be rosy-cheeked, blue-eyed and tall-statured. These qualities belong not to the woman of Rome; moreover, I saw her burning with anxiety, so I knew that the patient was her husband. As for his strangerhood, I noted that the dress of the woman differed from that of the townsfolk, wherefore I knew that she was a foreigner; and in her hand I saw a yellow rag, which garred me wot that the sick man was a Jew and she a Jewess. Moreover, she came to me on First Day; and 'tis the Jew's custom to take meat puddings and food that hath passed the night and eat them on the Saturday, their Sabbath, hot and cold, and they exceed in eating; wherefore flatulence and indigestion betide them. Thus I was directed and guessed that which thou hast heard."

Now when Galen heard this he ordered that the weaver be given the amount of his wife's dowry and bade pay it to her and said to him, "Divorce her."

Furthermore, he forbade him from returning to the practice of physic and warned him never again to take to wife a woman of rank higher than his own; and he gave him his spending money and charged him to return to his proper craft.

HAEC FABULA DOCET

We have here the eternal underlying factor in the success of the quack: his readiness to promise absolutely to cure anything and everything. His apparent self-confidence is so unbounded that even the skilled physician begins to wonder whether the quack has not some secrets not possessed by the profession. When the physician gets a little closer to the quack, however, he finds that the main elements in the latter's success, besides his confidence-inspiring boasts, are his knowledge of human nature and his skill in playing on foibles and credulity. As a rule the medicines he gives, like those of the weaver-leech, are such as do harm rather than good, but yet is the quack in honor and the money he makes is far beyond the amount earned by the regular physician. The real motive for the leech's change of occupation is similar to that of the quack to-day: that he may have a more dignified occupation, make more money and live up to his wife's idea of social station. Galen's method of managing the quack is that which we have found necessary in modern times. We have had to investigate the methods of the quacks and their supposed new discoveries and then we have had to arrange that they should no longer be allowed to exploit the public.

The whole story is as true to human nature in the twentieth century as it was in the fifteenth, or perhaps in the fifth century B. C., when Herodotus may have heard during his travels a version of it with some forerunner of Galen as the learned physician in the case. Men do not differ much in essentials from age to age; and the history of quackery has many other chapters like this that show how enduring are the best and worst in human nature, and how superficial the changes produced by environment.

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THE TREATMENT OF FRACTURES; SOME PRACTICAL POINTS *

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The most important step in the treatment of fractures is that the surgeon shall have made a diagnosis of the condition which he is about to treat. To undertake the treatment without an adequate picture in one's mind of the bony lesion present detracts materially from the satisfaction in one's work and conduces sometimes to poor results, on the one hand, or to unnecessary confinement of the patient, on the other. So important is this that when the surgeon is not able to satisfy himself as to the full character of the injury by means of

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* Read before the Associated Physicians of Long Island, Garden City, Oct. 31, 1908.

the ordinary methods of examination, the two artificial diagnostic aids should be called on, and either general anesthesia or the *x*-ray employed.

Still, the old and simple methods of diagnosis are of the greatest value. In many of our hospitals young men are subjecting all their fractures to the *x*-ray for diagnosis. This is most valuable for corroborating the diagnosis, for bringing out the details, or for clearing up difficulties; but to employ the *x*-ray *de novo* as a routine, results in a blunting of their diagnostic sensibilities and places them at a disadvantage when required to treat fractures when they have not access to the *x*-ray.

Let us not fall into the error of thinking that, because this subject of fractures is one of the oldest branches of surgery and deals with the commonest of surgical lesions, it has attained to anything like its ultimate perfection. It is still in the hazy stage of development. I have no hesitancy in stating that some of the newer and more dramatic branches of abdominal surgery are more nearly perfected than is the surgery of fractures, which has occupied therapeutic ingenuity from a time antedating recorded history.

The surgeon does wisely to think of a fracture as a wound—a wound of bone—which in its treatment and healing is amenable to the same rules that govern the healing of wounds in other parts of the body. The more widely the wound surfaces are separated the greater is the damage to the blood and lymph channels and to the nerves. The more mobility there is the greater will be exudate and swelling. Conversely the sooner and more accurately the wound surfaces are brought together and retained in apposition the less will be the swelling and the more perfect the healing.

We have not only to think of the wounded bone, but of the structures which lie in relation to it. The muscles play an important rôle, but muscular resistance is often regarded as the obstacle to reduction when the trouble is due really to the interposition between the bone ends of fascia, of a bundle of muscle, of a clot, or of periosteal tissue, which the *x*-ray does not reveal. When manipulation does not force such fractures from their entanglements, a satisfactory result is best secured by operation. Unless operated on these fractures are the ones which give delayed union or non-union.

There is much misconception of this question of non-union. Students are taught much about constitutional weakness, old age, and lack of earthy salts in the blood; but these, in my judgment, are insignificant. The vast majority of cases of non-union are due to the conditions just narrated. Given broken bone surfaces held in close apposition, bone to bone, and they will grow together, just as they do in fractures of the skull; but let soft tissues be interposed and the patient is a candidate for the so-called non-union—and a diet of oyster shells and parlor matches will not alter the case.

Swelling is another important consideration. It is due to exudation, 1. from the wounded bone surfaces and, 2. from the surrounding soft tissues which are injured by bone fragments or by loss of support. We may put it down as a pretty general rule that this swelling is in direct proportion to the amount of mobility. The exudate from the bone itself amounts to but little. Most of it is from the damaged blood channels of the neighboring soft tissues. The swelling in fractures of the skull is inconsiderable, notwithstanding that the total area of bone surface involved is commonly more than in fractures in the leg or arm, and the vascularity greater. The reason for this is the natural immobility of fractures of the skull. For these reasons the best results in the treatment of fractures will be secured by early immobilization. The sooner a fracture is reduced, its bony surfaces brought into apposition and held immovably, the less will be the swelling and the more satisfactory the result.

There is a prevalent notion of waiting until "the traumatic reaction has subsided." This ancient phrase rolls off the tongue sonorously and sounds important—we have heard our teachers and the men we venerate use it. But there is traumatic reaction going on all the time as long as the bones are out of place or so long as they are movable. There is also an ancient practice of deferring serious treatment until "the swelling has gone down" (another legacy from the dead past). If we can effect immobilization soon enough, the swelling will not come up. Lead and opium and other embrocations have no place in the modern treatment of fractures.

In most hospitals, however, when a fresh fracture of the tibia and fibula is brought in, it is put up temporarily in a vast amount of cotton and basswood splints in such a way that the bones are not immobilized. Swelling is expected, and the expectation is fulfilled. After the muscles, tendon sheaths and nerves have been infiltrated with exudate for a week or so the serum is sufficiently absorbed for the leg to be properly immobilized.

Can anything better than this be done? I think there can. For many years it has been my teaching and practice to correct deformity and permanently immobilize such fractures as soon as possible. When the fracture is seen within two to twelve hours after the accident there is usually no swelling present. I am in the habit of drawing a long white cotton stocking over the leg and applying plaster of Paris immediately over this. It does not require a heavy covering with the plaster bandage to immobilize the fracture. It need not be more than one-eighth of an inch thick. It is important that the bandage next to the stocking be applied without folds and with the most perfect possible evenness. No reverses should be made. The bandage should be allowed to run out flatly, and when it is wished to change its course it should be cut and started in the direction desired. If you want an idea of the difficulty of doing this properly examine the ridges and unevennesses to be seen on the inside of the ordinary hardened plaster cast after it is removed.

A thin cast applied over the stocking conforms to the shape of the leg and allows of an estimate of the lines and contour which can be compared with the other limb. A good plan is to cut through this cast on either side so as to divide it into an anterior and posterior half. This can be done before the last banadage is applied, and while the plaster is still soft, by using a sharp scalpel or bandage scissors. Then the final bandage is put on. Later when the cast is hard, if it is desired to inspect the leg, it is an easy matter to cut through the outer bandage, following the underlying crack, and lift off the front half of the splint. This operation is facilitated by employing two stockings instead of one, and at the first cast-cutting operation, dividing the outer stocking, which is adherent to the cast, and leaving the under stocking intact.

Putting up a fracture immediately after its occurrence is not usually regarded as good surgery. It is not good surgery if the cast is not put on well. But if it is smoothly applied and the apposition is good there will be no further swelling, provided there is no extraordinary condition present, such as imperfect reduction, rupture of large vessels, or venous obstruction. After such immobilization the leg should be free from pain. There should be no throbbing or discomfort: if there is, the chances are that the reduction is not good. Such a splint should never be left on in the presence of pain. It is very rarely that pain is present after this treatment.

Now, I do not promulgate this as the best routine treatment of fractures of the lower extremities. To do so would be as wrong as to say that every fractured patella should be sutured or that every inflamed appendix should be operated on. That would be a dangerous teaching. What I do say is that in experienced and skilled hands this is the best treatment.

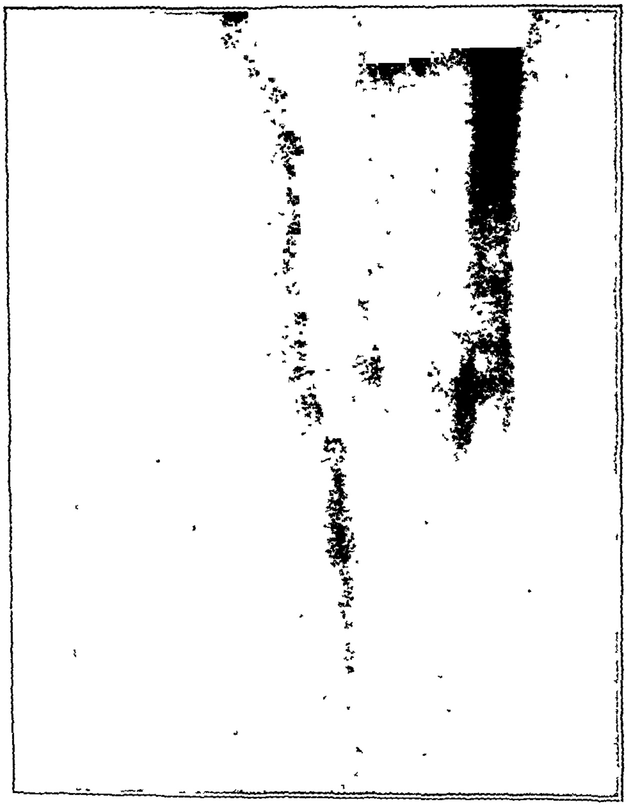

Fig 1.—Fracture of tibia and fibula in plaster case. Position corrected with the aid of the *x*-ray. Best possible correction. Observe lateral displacement of fibula and loose fragments of bone.

Another matter to which attention may be called is the manner of extension in fractures of the thigh. In the ordinary fractures about the middle third of the femur, the overriding of the fragments is considerable, but there seems to be little appreciation of the great amount of force required to overcome the muscular contraction and bring down the fragments into place. Under the best conditions there is rarely a complete correction of the overriding. Fortunately, most fractures of the shaft of the femur are oblique and the broken bone surfaces slide over one another, longitudinal shortening causing but little lateral displacement. When the fracture is transverse the overriding produces lateral displacement equal to the diameter of the bone, often interposes more or less soft tissue and becomes a more serious thing. In order to overcome these longitudinal displacements in a man an extension which is more than the patient can tolerate is necessary. If the fracture is oblique, twenty to forty pounds will nearly correct the overriding; if it is transverse, that amount will not bring the bone ends into apposition either with or without the use of a general anesthetic.

What I desire to call attention to particularly is that the time to apply this extension to accomplish results is immediately after the accident. Every hour adds to the infiltration, with serum, blood and leucocytes, of the connective tissue, fascia and muscle about the fracture, and diminishes the elasticity of these tissues. What can be done by twenty pounds of traction in the first twelve hours can not be done by forty pounds after the third or fourth day. Dr. Stimpson's proposition to tire out the muscles by traction does not work here. Instead of relaxing, the tissues become more resistant. Still, I have seen surgeons begin with a moderate amount of extension, then after a few days measure the legs and find shortening and add five pounds, continu-

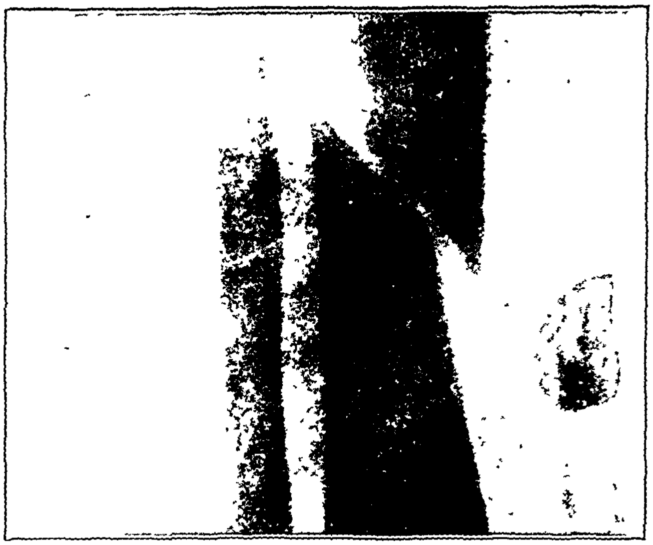

Fig 2.—Fracture of lower end of tibia in plaster case. Presumably in good position. Observe lateral displacement and overriding.

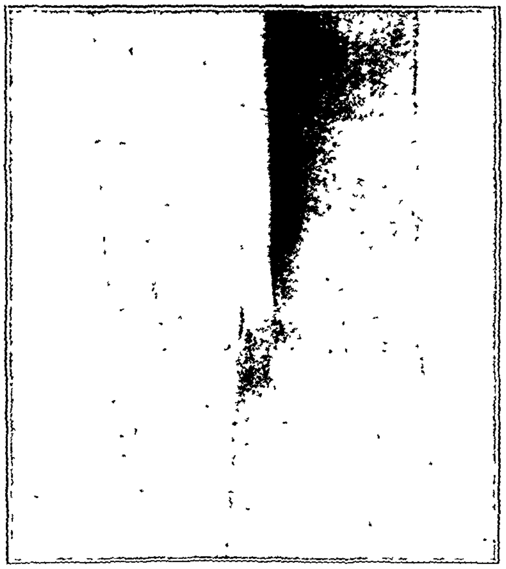

Fig 3.—Fracture of tibia and fibula in plaster case. Presumably good position. Observe lateral displacement, angular displacement and shortening.

ing to repeat this until by the end of a week or so they get up to an amount of extension which if applied on the first day would have done much good, but which on the seventh day is ineffective. The time to put on the maximum extension is at the very first—from twenty-five to forty pounds in a man—then at the end of a week, ten days or two weeks, this extension can be reduced, or even sooner if necessary.

The *x*-ray has revolutionized our conception of fractures. A broken bone was once thought of as a simple *mechanical matter to be considered in the same light* as a broken stick or other broken object, the treatment consisting naturally of putting it back into position and keeping it there until it could grow together. Then came the callus, like a plumber's "wiped" joint, and sealed it together. There is still in the public mind an unfortunate practice of thinking of a fracture as a matter of the bone alone, when in truth so many other structures are involved that the bone is but a single part of a pathologic complex.

The *x*-ray has shown that an accurate replacing of fragments is rare. It is unfortunate that the public expects a perfect piece of joining from the surgeon, who works on an unseen structure covered by muscles, vessels and nerves, which often make it even impalpable. When we secure a perfect functional result we permit the idea to prevail that we have done a perfect piece of joining. Let us not forget that a perfect functional result is compatible with an imperfect piece of joining. In most of the complete fractures of long bones of the leg the apposition is far from correct. Open operation is the only method by which they can be made correct. A restoration of function is the thing we aim at. But we should disabuse the public mind of the idea that that requires accurate apposition.

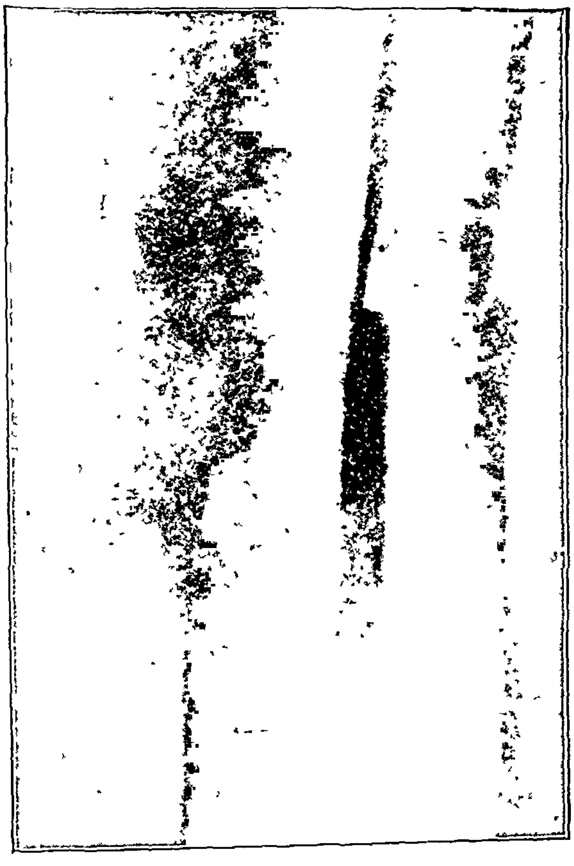
Fig. 4.—Fracture of tibia and fibula in a very fat leg in plaster case. Presumably good position. Observe lateral displacement of tibia.

Many times I have put up fractures of the tibia with the greatest care and been confident that the apposition *must be perfect, only to find* on *x*-ray examination glaring failures of apposition. Still, good functional results were produced in these cases, but had the patients seen the *x*-ray plates we may be sure that they would have been fearful lest they never again be able to use their limbs. This is one of the values and dangers of the *x*-ray—valuable to the surgeon and patient for the help it affords in permitting the surgeon to know the condition of the bones, dangerous to the surgeon and the patient for its misleading effect on the mind of the latter.

I show here a number of pictures illustrating the importance of the *x*-ray and also the difficulties in securing perfect apposition even when guided by this important aid. Good functional results were produced in all of these cases. It is true that I could present a larger number of pictures showing more perfect apposition, but the points which I desire to impress are the following:

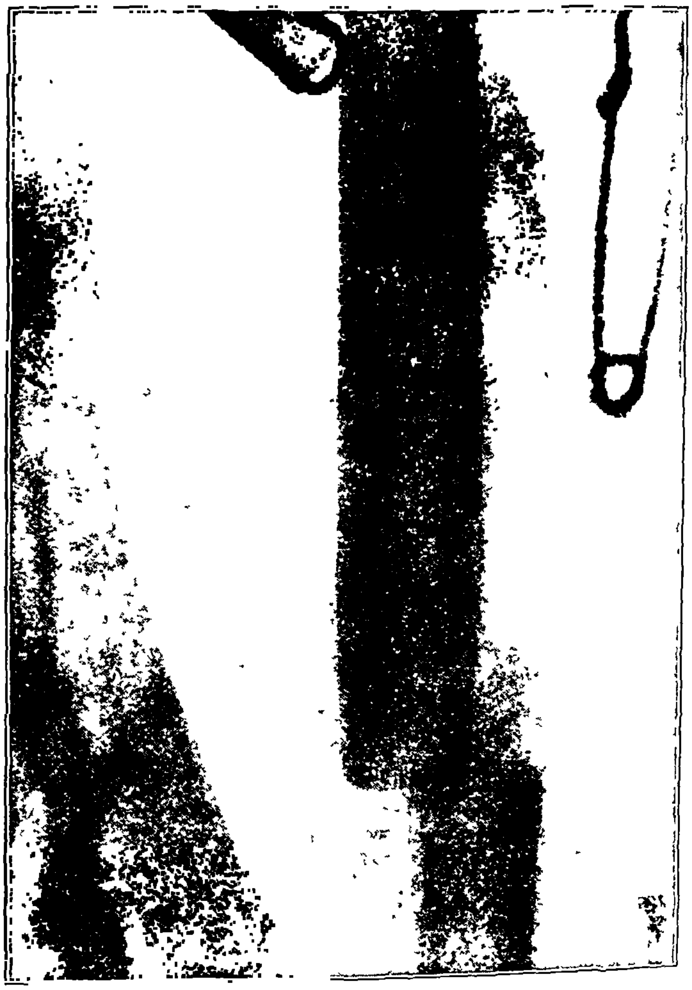
Fig. 5.—Fracture of shaft of humerus after reduction and immobilization. *In apparently good position*, but actually with lateral displacement equal to half the diameter of the bone.

1. The perfect reduction of fractures of long bones is difficult and often impossible without operation.

2. Without the *x*-ray we are always in the dark as to the actual conditions present.

3. Reduction with mathematical precision is not absolutely essential for a good functional result.

4. If surgeons would display as much zeal in discussing their imperfect results as they do in presenting their triumphs, our literature would be richer, more practical and of vastly more value, and the public would be less prone to expect impossible things in the treatment of fractures.

386 Washington Avenue.

BLOODLESS HYSTEROTOMY AND PRELIMINARY LIGATION

AS AIDS TO CONSERVATIVE MYOMECTOMY

ARTHUR E. HERTZLER, M.D.
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The correctness of the general surgical principle to conserve as much as possible has never been questioned, and in the operation on fibroids of the uterus this general dictum has been followed within certain limits. I desire to present a plan of procedure looking to an extension of these general principles as usually carried out.

The factors which have limited the application of conservatism to the affections of the uterus have been fear of hemorrhage and of infection from opening into the cavity of the uterus. There are no longer grounds for the latter fear. We open into the cavity of the uterus without danger of general infection in the radical operation of supravaginal hysterectomy, and the body of the uterus is much less frequently the habitat of pathogenic bacteria than is the cervix.

The chief hindrance to conservatism, then, is the fear of hemorrhage. The difficulty of control of hemorrhage depends on the character and location of the tumor. In subserous myomata conservative procedures are the rule. The technic usually employed is to make an elliptical incision about the base of the tumor and shell it out. Hemostasis is secured by passing a number of deep sutures through the wedge-shaped defect thus produced. The loss of blood in the interval between the removal of the tumor and the placing of the sutures is often considerable. The stitch-holes themselves often occasion

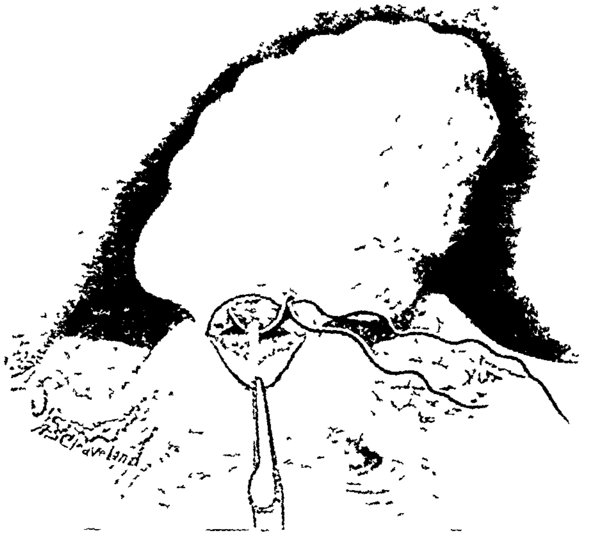

Fig. 1.—Ligation of the blood vessels supplying a tumor of the uterus.

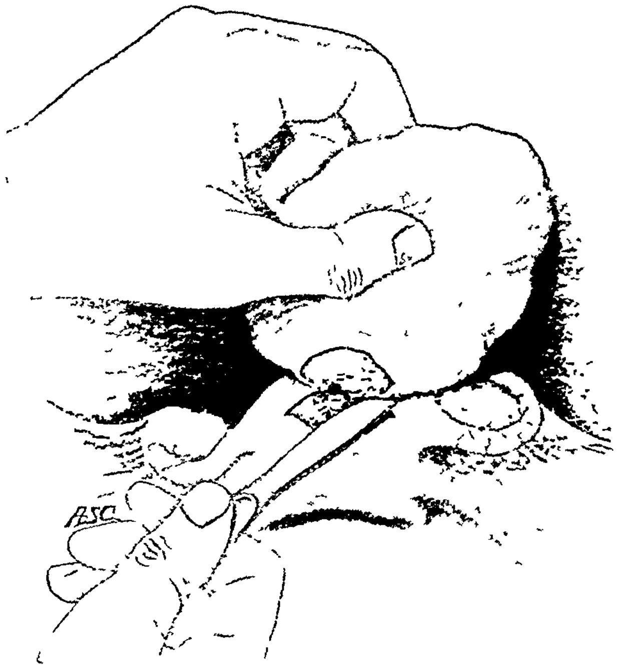

Fig. 2.—Removal of the tumor.

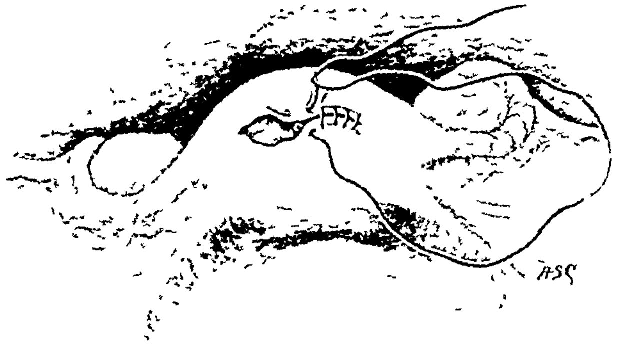

Fig. 3.—Suture of the peritoneal edges.

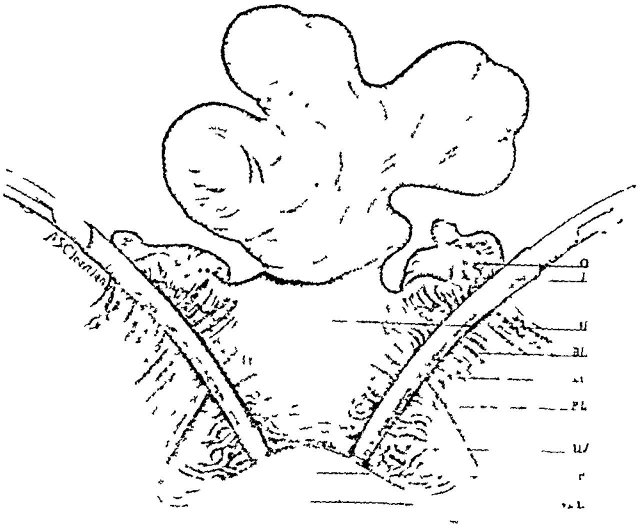

Fig. 4.—Bloodless hysterotomy in multiple tumors with common base. O, ovary; T, tube; U, uterus; B L, broad ligament; L U, left ureter; R L, round ligament; U V, uterine vessels; B, bladder; R and L U, right and left ureters.

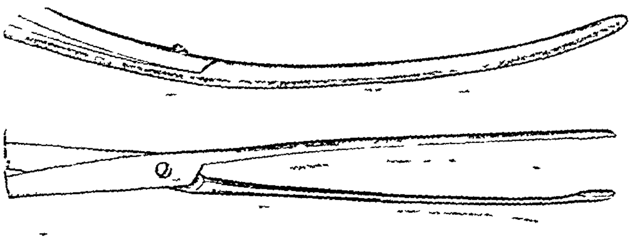

Fig. 5.—Clamps used in bloodless hysterotomy.

been cured by collargol. Infections with some of the higher forms of bacteria (actinomyces, pathogenic yeasts, etc.) appear to be at times favorably influenced by drugs, chiefly the iodids. With several parasitic infections (malaria, syphilis, and perhaps some trypanosome infections) we have special specific drugs for each disease.

Such, in brief, have been our very limited resources in regard to infectious diseases and their treatment with drugs. With the great majority, and this includes most of the common infections, we have had no therapeutic measures of any kind that could rationally be considered to exercise any noteworthy direct control over the infection itself—we have, rather, been confined to measures that help the patient by increasing his resistance and to those that antagonize dangerous symptoms. If the claims regarding collargol are correct, we have in it for the first time a drug that will prevent nearly any bacterial infection if used prophylactically (especially puerperal infections, but these may be due to a great variety of bacteria). It is also said to check existing infections, if used early, and often produces recovery in desperate cases. No distinction is made against any variety of infection—it acts "in the most varied medical and surgical infections."

If this is true, the drug is a tremendous boon to humanity; if not true, these claims are cruelly misleading. No drug on the market that has a reliable standing has had made for it claims so far-reaching as these. The very importance of these claims demands that they should not be advanced without evidence that will withstand critical examination and that is at least reasonably convincing and fairly free from contradiction—at any rate among those writers whose opinions are justly looked up to.

TWO KINDS OF ACCEPTABLE EVIDENCE

The burden of furnishing this evidence rests clearly with those who make such unusual claims. It is, of course, not our province to present new evidence for or against the drug but to examine that submitted. Two kinds of evidence we may be prepared to find convincing: First, careful experimental demonstration that a preparation has properties that justify the expectation that it will produce the effects claimed, this to be followed by a reasonable amount of clinical demonstration that it does produce these effects in the sick human being; second, an overwhelming mass of clinical evidence that, whatever the pharmacologic action, the substance does produce the effects that are claimed. Both these forms of evidence together would be most satisfactory, but the latter alone will do, if the facts are unassailable, for we have repeatedly learned to recognize valuable effects from drugs empirically, and without being able to demonstrate clearly their manner of action.

THE EXPERIMENTAL EVIDENCE

In order, however, that the first method be convincing of such striking effects, the experiments must be extensive and the results must be very positive, and creditable investigators must not be seriously at variance with each other in their facts and conclusions. In order that clinical results shall be dependable, they must be very numerous, and the opinions must be reasonably near to unanimity, and, far more than this, they must be contributed by trained observers, and must show evidence of accurate and critical observation. Without these united characteristics, mere numbers of reports or observations count for nothing, for we well know in how many instances wonderful results have been thought to have been obtained from therapeutic measures that more or less rapidly fell into utter disrepute. Every one, we think, will agree with the conditions we have laid down. We state them here only to indicate frankly the attitude with which we approached the consideration of the testimony.

As to the pharmacologic properties claimed for the drug, those properties, as well as the clinical effects, are most systematically described in the pamphlet issued in 1907 and marked by you "C," and since this pamphlet in its context or in the bibliography covers nearly the whole matter we may devote our attention chiefly to the statements made in it. When any pamphlet is referred to henceforward we shall mean this pamphlet, unless otherwise stated. When references are made to individual investigators to substantiate the claims made we shall, of course, need to discuss the work of these authors from a critical standpoint and comment on it with customary scientific frankness.

COLLARGOL IN THE BLOOD STREAM

In the beginning of the description of the pharmacologic properties, on page 4, it is stated:

> "After intravenous injection, collargolum circulates in the blood-stream only a short time; two hours afterward, it is already deposited in the liver, lung, heart, spleen, intestines and kidneys. After eight to ten hours it is present in the blood only in traces;" etc.

No authority is given for the statement that any remains in the blood eight to ten hours after its injection. Cohn (who is repeatedly quoted by the writer of the collargol pamphlet in other connections) states directly that he could find none in the blood after forty-five minutes. The statement in the pamphlet might easily convey the impression that collargol circulates in the blood for eight or ten hours in effective quantity. This is evidently not the opinion of the agents, for, in a typewritten sheet sent to the committee by Schering and Glatz, it is argued that Brunner's results in experiments with collargol, in which the substance was injected after the infection of animals, are incomplete, because "after *an hour* (italics ours) collargol has disappeared from the blood." It is, of course, a matter of great clinical moment whether collargol is effective after one hour or for more than ten hours. The ambiguity is, therefore, very regrettable, though we are ready to believe that no misstatement was intended.

No evidence is given in the pamphlet as to the condition in which collargolum circulates—a matter of very serious importance, it would seem, for all its peculiar combination of harmlessness and great potency against infections is referred to its colloidal nature, and, unless it circulates in colloidal form, this which is emphasized as the only essentially valuable characteristic that it is recommended as having is lost. In your correspondence with Schering and Glatz which you sent to the committee, you inquired about this matter, and they answered that it was a difficult matter to determine, and that they had referred the question to the manufacturers of the substance, the Chemische Fabrik v. Heyden. Later, in their letter of Oct. 24, 1907, having heard from the manufacturers, Schering & Glatz state:

> "That collargolum circulates in the body as colloidal silver is shown by Hocheisen's findings, who found that it had precipitated on endocarditic ulcerations in the form of bluish-

> black particles. Moreover, if collargol were changed in the body to ordinary silver, or to silver salts, the large doses which are usually employed would inevitably occasion argyria —an effect which has never been seen from it. Hamburger (*Arch. f. physiol. Med.*, 1906, Nos. 2 and 3, pp. 83-97) says that the fact that colloidal silver remains as such in the blood is due to the presence of other colloids, i. e., albumin."

This is certainly not evidence. Hocheisen's observations mean merely that it had precipitated out in some form. Whether this was colloidal silver at the time of its precipitation or shortly before is not determined by his observations. Indeed, he made no attempt to settle this point. The lack of argyria means nothing definite as to the actual form in which the drug circulates, and Hamburger merely expresses an opinion on the basis of analogies with experiments "in glass"—he did not actually investigate the question, and it should be noted also that Hamburger speaks here simply of "colloidal silver," and that in the sentence immediately preceding the portion quoted speaks of how much longer electrolytically prepared colloidal silver remains in the blood than does that which is chemically prepared (collargolum is chemically prepared). We have, in fact, been unable to find any definite evidence as to the form, colloidal or other, in which it circulates, but we might direct attention to the fact that van Waveren (*Weekbl. voor Geneesk.*, No. 10, 1905) is said, in an abstract of his article, to have reached the conclusion, after experimental work, that it is quickly transformed into silver-salts in the blood. The original of his article we were unable to consult. We would also direct attention to the fact that Bamberger, whose paper is referred to favorably in another connection in the pamphlet, states (and this not quoted in the pamphlet) that it is precipitated out after injection, and we must look on collargol as providing in the blood, not a solution, but a large number of actual particles of silver, and he considers that whatever effects are obtained by it are due chiefly to the leucocytosis that these numerous foreign bodies set up. The claim, then, that collargol circulates as such in the blood is not supported by evidence, and any statement that it has been proved that it does so circulate is directly misleading.

ABSORPTION OF COLLARGOL ENEMATA

Further down on page 4 of the pamphlet it is stated that Henri and Gompel, and Loebl, have demonstrated that collargol is absorbed when administered as an enema. Here there is, in the one case, an unjustifiable assumption, and in the other painfully weak evidence. Henri and Gompel, according to the reference given, did not work with collargolum at all, so far as is stated. They used, on the contrary, colloidal silver, electrolytically prepared. This may be the same as collargolum, or it may not; but it is a noteworthy fact that a number of Henri and Gompel's countrymen consider that the effects of the two are different, and actually describe differences that they have observed in the two substances or in their therapeutic or experimental effects. Until conclusive evidence has been produced to show that they are identical, we have no right to assume that the results of experiments done with the one may be accepted as applying to the other, any more than we have a right to assume that many other substances that appear superficially to be alike have the same actual properties until so proved.

Loebl's work is so far from offering satisfactory evidence that it scarcely deserves discussion. His evidence is comprised in the following observations. He administered it per rectum in several cases in which death was sure to occur. We quote from the translation of his article in pamphlet "D":

> "Histologic examination of the rectum in the one case, as that of the spleen, liver, kidneys and rectum in the other, showed *no* opaque granules [italics ours] of metallic deposit in either the stained or the unstained specimens. Only the unstained sections of the rectal mucosa in the former case showed the epithelial layer clouded and looking as if it had been dusted over with something; *but it was uncertain whether this was due to absorption or to postmortem imbibition* [italics ours], as the last injection was administered only a few hours before death. In the spring of 1903, however, in a case of erysipelas that died a few days after the last collargolum injection, high magnification showed isolated black granules in the epithelium of the glomeruli, *which were probably* [sic! italics ours] precipitated silver."

We doubt whether any one would be convinced from these observations that collargolum enemata are absorbed!

IS IT ABSORBED BY GASTRIC OR INTESTINAL MUCOSÆ?

It is also said that abundant experimental proof exists of the fact that collargolum is absorbed by the skin, by the subcutaneous and muscular tissues, and by the gastric and intestinal mucosæ. There is some evidence that it is absorbed by the skin and by the subcutaneous and muscular tissues, though Schering & Glatz omit to state here the highly important fact that many of the warmest advocates of the use of the substance insist that its subcutaneous use is impracticable, because of the danger of causing severe local reaction. We have been unable to discover any definite experimental evidence that it is absorbed by the gastric and intestinal mucosæ, though it is stated to be abundant. The closest that we have come to finding evidence is their statement from the October, 1907, pamphlet, p. 4:

> "When collargolum is given per os it may be that it is precipitated by the free acid of the gastric secretion, though Beyer thinks not. Even if it is precipitated, however, it again goes into solution when the acids are neutralized by the alkaline intestinal juices."

Who, however, has presented any direct evidence that it actually is absorbed? Who has shown that after being attacked, not only by the hydrochloric acid of the stomach contents, but also by all the other substances in the digestive tract, it is still colloidal silver when it comes to the point of being absorbed, even if it does go into solution again in the intestinal contents? Most drugs, when given by mouth, are absorbed in a different form from that in which they are administered, and we certainly can not assume, without evidence, that this particular drug is an exception. With most drugs the changes that occur are of no consequence, but in this instance we must remember that the original form is of paramount importance in its supposed action. Furthermore, the fact that is repeatedly stated in articles referred to in Schering and Glatz's advertising matter, that colloidal silver, *because of its colloidal character, does not pass animal membranes*, contradicts their other contention that it passes the gastric or intestinal mucous membrane in colloidal form, and it is only in colloidal form that special virtues are claimed for it. Nevertheless, this drug is positively recommended for oral and rectal administration in dangerous diseases. The statement, then, that there is abundant experimental evidence of the absorption of collargolum as such from the alimentary canal is not only misleading but totally unjustifiable.

NOT EXCRETED IN THE URINE

Also it is stated (p. 4) that Baginsky, Buberl and Kunz-Krause have shown the presence of collargolum "in the renal excretion," thus indicating that it is partly excreted in the urine. The facts are, however, that Lange, who worked under Kunz-Krause's direction (this is the article to which the pamphlet refers, Kunz-Krause apparently having done no work on it himself) found it *absent* from the urine, and distinctly so states, and this fact is referred to in several instances by authors whom Schering & Glatz quote in this connection. It may, indeed, be seen in print in their other pamphlet that you have marked "D," in the matter that they quote on page 7: ". . . or, perhaps, as Lange holds, the metal is not excreted in the urine." Buberl states clearly that in three of the four cases in which he found it in the urine there was pyuria, and he considers its presence accidental and due merely to the fact that the leucocytes of the pus had carried some into the urine with them—not that it was excreted by the kidney. Baginsky, so far as we can determine from studying the reference given, made no observations at all on its excretion. This is clearly a direct inversion of the results of one of these authors, a misrepresentation of the second, and pure fiction in regard to the other. These misstatements can scarcely be excused as "justifiable optimism."

EXPERIMENTAL RESULTS IN ANIMALS.

Under the heading, "Modes of Action" (p. 4, *et seq.*) the fact is admitted that experiments on animals have not given concurrent results, but this is accounted for as follows:

> "Some of the experimenters have chosen a mode of infecting the animals which is far more brusque than occurs clinically; they have injected intravenously highly virulent bacterial cultures. Moreover, a negative result was to be expected in all cases in which the injection of Collargolum was made before or simultaneously with the injection of the infective material, as eight or ten hours after Collargolum is injected only traces of it remain in the blood. Experimenters who gave the Collargolum injections only when the animals showed signs of severe infection have saved them (*Beyer, Pinto*). Ernst Cohn's unfavorable report is criticised by Bamberger (Senator's Polyclinic) because Cohn injected the Collargolum before the infective material. Thus, the infection reached the blood at a time when a large portion of the leucocytes was busied with the silver particles and the organism was robbed of an important element of protection. In one case in which Cohn waited until the animal was violently ill, it at least outlived the control."

A critical reading of the papers referred to in this paragraph illustrates this matter from a wholly different standpoint, however. In one or two points the statement quoted above can be looked on only as a misleading mutilation of the work of Cohn, which, in actual fact, is both the most extensive and the most careful work that has been done on this part of the subject. This author carried out experiments on nearly thirty animals. He controlled his cultures carefully, to see that they were actually capable of producing infection. He injected collargol before infecting the animals in some cases, but in numerous instances he injected it after they had been infected. He also infected animals otherwise than by the so-called "brusque" method of injection. In a series of animals he rubbed streptococci into the skin and produced erysipelas, and these animals he treated as follows: One was injected with collargol before infecting it. Of the others, one was not treated at all and was used as a control, while of the remaining two, one, after it became ill, was given collargolum intravenously, the other, after it became ill, was given collargol by injection. It is a somewhat suggestive fact that in this group of animals the control was the last one to die.

Beyer, whose results are repeatedly quoted in contravention of Cohn's, did experiments, so far as one can determine from the report referred to, on no more than three animals. He used no methods to determine how virulent his cultures were, so far as he states (he merely *says* that they were virulent), so that we have no means of determining whether his results were due merely to his having not produced an infection of any severity; the number of observations also is too small to be of any value as against the numerous negative results of more careful studies.

Pinto's paper we have been unable to read, but other authors who abstract it refer to Pinto as having done what is objected to in the work of Brunner and Cohn—namely, that he injected collargolum as a prophylactic. He is approved of because he seemed to get good results. Evidently the judgment of the writer of the pamphlet is governed more by commercial considerations than by scientific consistency. Even if the bias in such a case be unconscious, it is none the less misleading.

To turn back, however, to the criticisms of Cohn's results. In the first place he did not, as is essentially stated, infect animals only by intravenous injections. We have already mentioned that he used other methods also. Further, Cohn's results are criticised in the pamphlet, as are Brunner's experiments in a separate sheet that was sent to the committee, because these authors injected collargolum before or simultaneously with the introduction of infectious material. This is a direct and clearly intentional misrepresentation of Cohn's work, for, as we have noted, he *in many instances* introduced the infectious material soon *after* the collargolum. He did it in most instances only ten to fifteen minutes afterward, to be sure, but this is just what Schering and Glatz apparently demand, when they insist that collargolum should not be injected much before the infective material, lest the collargolum disappear before the infective material reaches the blood, for, they say, collargolum disappears from the blood stream within an hour. Certainly ten or fifteen minutes after the infectious agents have been injected into the blood stream these agents and the collargolum *ought to meet* if collargolum is injected at this time. Furthermore, when Cohn used collargolum before he infected the animals, it was only ten or fifteen minutes before, and Brunner in some of his experiments used it only ten minutes to half an hour before he infected the animals. If within this short period collargolum had escaped entirely from the blood stream, it requires pretty nice judgment to determine whether it does, as is claimed, circulate in the blood stream at all.

COHN'S WORK NOT DISCREDITED

But the most objectionable feature of the paragraph in question is this: Bamberger's criticism of Cohn, which is quoted above, when examined in the original, proves to be very weak and specious, and was apparently prompted by the fact that, unless he could discredit Cohn's results, his own work would have seemed wholly worthless. Bamberger, however, is truthful, in that, in connection with the criticism quoted above, he puts in the qualifying clause, in parenthesis, "This applies, however, only to the experiments with the staphylococcus," thus intimating that there were other experiments to which his criticism did not apply. When Cohn's work is looked at carefully, this intimation appears important and pathetically weakens Bamberger's criticism, for the work with the staphylococcus is really only a small fraction of what Cohn did.

When Bamberger's criticism is translated into this pamphlet, however, the qualifying phrase quoted above has disappeared, and it is now in such form that it reads as if the criticism applied to the whole of Cohn's results and destroyed his conclusions. It implies that Cohn had in but one instance injected collargolum after injecting the animals; while, as a matter of fact, as we have stated, he did this many times. This is an injustice to Bamberger and misrepresents what he said, and it is somewhat worse than a misrepresentation of Cohn. Toward him and toward those who read the pamphlet, it is the opposite of what scientific men call honesty.

ITS PROPHYLACTIC VALUE

There is a further aspect of this criticism that is applied to the work of both Cohn and Brunner, though, as we have said, wholly unjustly to Cohn—the criticism, namely, that when collargolum is injected before infecting animals the results are valueless. Whatever the actual effects on infections may be, this criticism carries the critic himself into perilous channels, for this reason: We are told that collargolum is a prophylactic against infections. A prophylactic is, of course, usually given before the disease occurs; hence, before the infection occurs. On the other hand, we are told here that injecting the collargolum even ten minutes before the animals were infected resulted in the infection reaching the blood "at a time when a large portion of the leucocytes was busied with the silver particles, and the organism was robbed of an important element of protection." This would certainly be a strange and unfortunate sort of prophylactic. In other words, we are told in one place that collargol is an efficient and harmless prophylactic; but when an investigator has tried to use it for this purpose the idea is stamped as absurd. Such inconsistency is reprehensible from the moral as well as from the scientific standpoint.

Finally, regarding this matter, we would also direct attention to the fact that Trommsdorf, who did experiments on twelve animals and who did give his injections not only directly after infecting them, but also six to thirty-six hours afterward, had results that, he states, were absolutely negative. His paper is indexed under the literature of the pamphlet but is not discussed in this connection. Also Baldoni, whose paper is indexed but not discussed, is said by several writers, whose articles are quoted, to have done animal experiments with unfavorable results. His original article was not available to us. It would appear, then, that this question has been attacked from all sides and that the great majority of the experiments have been negative. Indeed, all the investigations that show intrinsic evidence of having been performed with due care are decisively negative. The implied claim that pharmacologic experiments have been, on the whole, favorable is, therefore, entirely misleading.

To go further in quest of the pharmacologic action of collargol: The pamphlet states (p. 5) that "it has no such bactericide effect as the silver salts," and that if it had, "it would then be destructive of cells as well," and hence dangerous. We can pass this over as not offering any explanation of its action. The pamphlet, however, does dwell on its bactericidal action in various connections, and particularly refers to the work that shows that in certain concentrations it restrains the growth of bacteria. Beyer, among others, has especially insisted on the importance of this. We would note in regard to this matter the remarks made by Mann in discussing Beyer's paper (these remarks are not referred to in the pamphlet, though Beyer's paper is referred to repeatedly). Mann says that if Beyer would compare the amounts of colloidal silver necessary to control bacterial processes in the laboratory with the amounts that are used, for instance, in horses, for the purpose of controlling bacterial growth in them, he (Mann) thought that it would appear that in the latter instance something closely approaching homeopathy was being used. There is certainly no evidence that collargol, in the concentration and during the time in which it could exist in the circulation, has any bactericidal action. Statements intended to convey the impression that it has such an action are unquestionably misleading.

ITS ACTION ON THE LEUCOCYTES

Much stress is laid on the fact that collargol produces a transitory leucocytosis. There are differences of opinion on this point also, but the general evidence seems to be in favor of the occurrence of this leucocytosis. We would, however, point out that, as several of the authors referred to in the pamphlet remark, and as is well known, a similar leucocytosis is produced by many drugs. Most of these drugs are not supposed to have the slightest influence on infections, and not one of them is credited with an influence at all like that claimed for collargolum. We may, indeed, state quite positively that at the present day the occurrence of a leucocytosis after the use of a drug is not known to have the slightest definite significance regarding its effects on a general infection; only a few enthusiasts still think otherwise. Hence this effect of collargolum, on which tremendous stress is laid in the pamphlet, can not be considered important. The effect after injection into the spinal canal in meningitis is a different matter. There it produces a local outpouring of leucocytes which may be useful: but, as Widal and Ramond, who did this, remark, the leucocytosis was due to the presence of particles of silver, and they clearly intimate that the effect was not specific in any sense, and that any other inert insoluble substance would have done the same thing.

Finally, we are told, in heavy-faced type, that:

> **"By reason of its colloidal nature, it has vigorous catalytic powers, which induce or enhance in the organism the process of oxidizing bacterial toxins, changing these to inert compounds."**

The evidence for this is said to be that Schade has shown that:

> "The electrocatalytic properties of metals, more especially in their colloidal form, may be developed in the living body. They facilitate the interchange of oxygen and hydrogen in the animal tissue fluids, and effect a quick and energetic increase of oxidation in the organism. It is readily conceivable that this may rapidly deprive ptomains and similar bodies of their poisonous character, as atmospheric oxygen does."

We need not devote much attention to this last remark, because it is stated here merely that "it is conceivable," not that Schade has shown it—and Schade actually has not shown it. It is conceivable but it is not to be accepted until evidence has been offered to support it. All the direct evidence given is that furnished by Hamburger, who investigated the effect of collargolum on the hemolytic action of staphylococcus toxin, Neisser and Wechsberg having stated that the hemolytic properties of the latter provide a reliable test of the activity of the toxin. (*The following figures are taken from* Pamphlet "B.") Hamburger found that ¼ c.c. of a 1 per cent. solution of collargolum added to 1 c.c. of staphylotoxin serum prevented hemolysis; and from this he decided that it destroys the toxin. He found, however, that it increased hemolysis when ¼ c.c. of a less than 1 per cent. solution of collargolum was used in 2 c.c. of staphylotoxin serum, and the same was true of still weaker concentrations. Does this mean that in these lesser concentrations it increases the activity of the toxin? We do not know, and are not told; but it would rather appear to do this, and certainly did not have a favorable effect.

REDUCTIO AD ABSURDUM

Let us grant that in the higher concentrations it has the influence desired on the staphylotoxin, and perhaps on other toxins, the figures given would, in relation to a human being, mean this: The concentration of (dry) collargolum, when ¼ c.c. of a 1 per cent. solution is added to 1 c.c. of other fluid (in the instance under discussion the fluid was staphylotoxin serum) is 0.2 per cent. Lesser concentrations than this increase hemolysis, according to Hamburger. Hence, to accomplish any good in the blood stream, and in order to avoid doing harm, we need at least a 0.2 per cent. concentration of collargolum in the blood. It has long been said that the amount of blood in the body is about one-thirteenth of the body weight, but more recent studies indicate that this is a little high. In order to be on the safe side, let us make it as little as one-twentieth of the body weight. With the usual so-called average man, who is commonly said to weigh about 70 kg., there would then be about 3.5 kg. of blood or 3,500 gm.; 0.2 per cent. of this amount of blood is 7 gm. That is, we should need 7 gm. of dry collargolum at each dose in order to keep up to the amount that Hamburger's figures demand if we are to do good. The preparation has been used for intravenous purposes most largely in a 2 per cent. or weaker solutions, until in the last few years, when it has been possible to use a 5 per cent. solution with the new collargolum. With the 2 per cent. solution we should need at least 350 c.c. to get the proper concentration in the blood; with the 5 per cent. solution the minimum dose should be 140 c.c.

The amount recommended and actually used, however, has ordinarily been less than 5 c.c.; only occasionally has the use of larger doses been reported, and never, so far as we know, more than 20 c.c. at a dose. Hence, if we follow Hamburger, the use of this preparation against bacterial toxins has not done any good, and, if anything, it would appear, indeed, to have done harm.

In any case the sole basis for the remarkable claim that collargol "has vigorous catalytic powers which induce or enhance in the organism the process of oxidizing bacterial toxins" are these experiments of Hamburger and Hekma, and a little consideration shows that they are totally irrelevant. The experiments were performed *in vitro* and have no bearing on what may occur "in the organism;" they simply show that a toxin (the hemolysin of staphylococci) which so far as is known has little or no pathologic significance is probably destroyed under conditions which do not obtain in the organism.[1] To build such far-reaching deductions on such a slender base of facts is certainly gross exaggeration, if, indeed, harsher terms would not be more accurately descriptive. The claim that experiment has proved that collargol in the body oxidizes bacterial toxins to inert compounds either is dishonest or, at best, shows an uncontrolled imagination which would totally *unfit its* author for drawing any scientific conclusions.

Some emphasis, further, is laid in the pamphlet on Robin's studies of the effects of colloidal metals on metabolism. In regard to these, we would say again that Robin has done nothing with collargolum, so far as he states; but, on the contrary, he seems to have worked exclusively with metals that were obtained by the electrolytic method, and chiefly with gold, according to the references given. As we have said in another connection, results obtained with colloidal silver prepared electrolytically can not by any means be considered to be results obtained with chemically prepared colloidal silver, namely, collargolum, and certainly the latter can not properly be compared with colloidal gold. Suppose, however, that this could be done; Robin's work is, in the first place, subject to the criticism that, contrary to the first rule in such investigations, it was carried out, so far as is stated, without control of the diet. Aside from this, however, if they mean anything, his results as recorded, indicate chiefly that there was increased tissue destruction; and this, in infectious diseases, is one of the things that we particularly try to prevent. The mere fact that a substance appears to have some sort of effect on metabolism is by no means direct evidence that it has a favorable effect.

This comprises all the matter of importance relating to the pharmacology of collargolum, so far as it is discussed in the advertising pamphlets and so far as we have been able to determine through other sources. It is apparent that this is wholly insufficient to establish or to aid seriously in establishing the very remarkable claims made regarding its effects and value. It seems to us, further, that while in some instances the statements made in the pamphlet are dependent merely on acceptance of insufficiently justified conclusions of the authors quoted, in other instances the statements made are directly the contrary of what the authors themselves have put into print, or they are palpable misrepresentations of the authors. Substantial experimental proof that collargolum has any of the pharmacologic actions claimed for it in these pamphlets is lacking, and this is evidence that the statements made regarding its pharmacologic effects are gross exaggerations. The misrepresentations are, however, to fair-minded persons, even more damaging evidence of the unreliability of the claims made. Whatever differences of opinion may exist as to the clinical significance of pharmacologic effects, everyone must agree that when pharmacologic claims are advanced they must be based on sound evidence. Still more important, they must not be contrary to the evidence, and, most important of all from the standpoint of common honesty, the statements made must fairly present the statements and conclusions of any investigators who are quoted. False claims are equally detrimental to the profession and to the public, whether the responsibility be referred to the house making the claims, to some subordinate, or to a vicious custom.

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[1] Dr. J. F. Anderson, assistant director of the Hygienic Laboratory, Washington, D. C., performed, at the request of a member of the committee, several series of experiments on guinea-pigs to determine whether collargol has any destructive action either *in vitro* or *in vivo* on a toxin of real importance and one whose toxicity can be determined with accuracy, viz., diphtheria toxin. The treatment of a minimum lethal dose of this toxin with solutions of collargol up to 0.5 per cent. for 2 hours had not the slightest effect on the toxicity; nor did the injection of 1 c.c. of 0.1 per cent. collargol directly into the hearts of guinea-pigs (250 gm.) delay in the least the death of animals which received a single minimum lethal dose of the toxin. We disclaim the intention of attributing to these results a wider significance than they possess. They merely prove that collargol has no action on one of the most important and experimentally most decisive toxins. At the same time, they emphasize the fact that we are not at all justified in presupposing that collargol has a general destructive action on all toxins, or even on most; or, indeed on any toxin. If it has such action, it must be definitely demonstrated with each individual toxin, before claims such as the foregoing can be honestly justified; and, as we have seen, no adequate evidence *on this* point has even been submitted.

THE CLINICAL EVIDENCE

It appears to us, then, that we have already sufficient evidence of conflict with the rules of the Council, which do not permit false, misleading or exaggerated statements. Let us, however, consider whether, putting aside the question as to the pharmacologic effects of the substance, there is clinical evidence of an amount and character sufficient to justify the statements regarding its clinical action.

As we have already indicated, we can not accept the standards regarding such evidence that Messrs. Schering and Glatz apparently adhere to. In their letter to you of Sept. 13, 1907, they say:

> "The claims made for collargolum are perfectly justified; they are not in the least 'at variance with the current scientific conceptions of the subject,' but, to the contrary, are substantiated by an enormous literature, as you will see on perusal of the pamphlets on collargolum which we sent you some time ago, and of which we mail you another set under separate cover. Few remedies have a stronger array of testimony in their behalf. We ourselves have record of more than 300 publications, and there are doubtless numerous reports which we have never seen, particularly in French journals."

METHOD OF DETERMINING VALUE

This clearly indicates that if the number of contributions regarding a substance is large, the value of the substance is thereby established. We must very frankly state that we do not agree with this. The number of observations must be large if clinical or other studies are to furnish reliable evidence; but beyond this, and still more important than this, the studies must be made by persons who show evidence of competence, and they must have been done with accuracy and care; and in using the literature to decide a question, adverse statements must be considered with as much open-mindedness as are those that are favorable. If any other course is pursued, multiplication of so-called "evidence" is merely multiplication of error. When any drug has been extensively advertised and very optimistic claims have been made regarding it, large numbers of favorable reports may always be found, whether the drug is valuable or not. If the favorable reports alone are considered and no attention is paid to their reliability or to any unfavorable reports, it would be extremely easy with any drug to reach the conclusion that it is of the utmost value.

Considering the fact that we confined ourselves almost entirely to the literature to which the promoters of this drug themselves refer, it would seem highly probable that we have examined reports that are in larger proportion favorable to it than would have been the case had we searched also for articles to which Messrs. Schering and Glatz do not refer. It should be remembered, however, that our task was not to decide whether the drug has *any* value; if that question could be decided at all it would be only by a consideration of all available literature. What we needed to do was to determine whether it approaches reasonably near to the value set on it in the advertisements under consideration. This we have been able to do by keeping within the limits indicated.

GENERAL RESULTS OF EXAMINING LITERATURE

It is clearly impossible for us to make reference here in detail to all the literature that we have gone over. It will suffice to take up a number of points in the pamphlet and quote a sufficient number of references to show that these points are not substantiated. These references will indicate that there is no *overwhelming* evidence that the substance is "a powerful and harmless systemic antiseptic in the most varied medical and surgical infections," or in any infection; that, on the contrary, when we consult the articles of men of recognized ability and judgment, we find that a very large proportion of them are extremely guarded in their conclusions. We find that, after extensive use of it, many of them decide that collargolum is practically valueless. Furthermore, in articles in which it is warmly recommended as a systemic antiseptic we find often intrinsic evidence that the author is clearly an unreliable enthusiast or that he presents no noteworthy evidence to substantiate his opinion; while in some instances the statements made regarding the benign effects of the preparation are accompanied by others that show such deficient or erroneous conceptions of anatomy, physiology, pathology or other fundamental medical knowledge that we should involuntarily distrust the conclusions reached by the author regarding any medical question.

CONFLICTING TESTIMONY

In addition to this, without searching outside Schering and Glatz's list but merely in looking over the articles referred to in the pamphlet, we have had our attention directed to a number of articles or discussions that directly contradict and give positive evidence against statements made in the pamphlet. Although these articles are quite as available as those that they quote, and the authors of the pamphlets must have been familiar with them, they are suppressed, and the extreme statements made are still permitted to stand. We find, indeed, direct contradiction of some statements in the pamphlet in articles from which they themselves quote, but these unfavorable statements are usually suppressed and the articles are used only in some other connection.

We find instances, likewise, in which statements attributed to an author in society reports (and such reports are generally unauthorized) are used in furtherance of the claims made, while when the original article itself is consulted the author's actual views are found to be much less favorable or actually unfavorable. This clearly misrepresents the author's real views in a way that is entirely unjustifiable.

DISTORTED REPORTS

Furthermore, and much more objectionable than any of the things that we have thus far mentioned, there are repeated instances in which portions of articles are suppressed in such a way as to make carefully guarded and, at most, only mildly favorable statements appear laudatory to a grossly exaggerated degree; and there are instances in which words are introduced into author's sentences in order to make them more emphatic; and, finally, obsolete views of authors, that they have since corrected in later articles, are given as their present opinions.

Such methods are clearly the opposite of a fair presentation of the subject. The reader of such statements will be deceived in precise proportion to the faith that he has put in the fairness and honesty of the presentation. The higher the standing of the firm that descends to such practices the more serious the offense, the graver the abuse of confidence, and the more positive the harm done. The explanation that the offense is a common practice does not by any means lessen this harm. The principle of "caveat emptor" has no place in science, nor can it be considered laudable, when the lives of human beings may be the price.

Having found these evidences of exaggerated, false and misleading statements in regard to the clinical side of the question, as well as the pharmacologic, we feel that we have answered your question. We will, however, refer to a series of articles that exemplify the points we have made. We will take these points up, not in order, but collectively, since in repeated instances one article illustrates several of our points and we wish for brevity's sake to avoid an unnecessary amount of quoting.

It is stated on page 8 that "Locally collargolum is a *certain*, simple, *universally applicable* surgical antiseptic for the prevention and treatment of sepsis" (italic ours). Hochheisen, however, who is quite extensively quoted in two other connections but not in this, states that during two years, when he was acting as an assistant to Landerer, he used collargol in surgical cases, injecting it under the skin and into the veins, and also applying it in powder form and as an ointment in septic wounds, in infected amputation stumps, in general septic conditions, in peritonitis, in severe phlegmons, in puerperal infections and in tuberculosis. He states: "I could, however, not say that I have seen even one single result that could not have been secured quite as well by the other customary surgical or general treatment that was used." He thinks the intravenous use may have some useful effects on general surgical sepsis. His opinion regarding its local use is, however, clearly positively unfavorable, after a large experience.

ITS USE IN SEPTICEMIA

The drug is particularly recommended for various forms of septicemia and pyemia, erysipelas, and especially in puerperal infections, etc. Let us see what is actually said by some of the persons referred to regarding its use in these conditions: On page 13 it is stated that Professor Tillmanns "says that he has often seen surprisingly good results from the internal administration, injection or inunction of collargolum in phlegmons, lymphangitis, general septic infections, etc." This provides examples of three very objectionable things. The facts are as follows: The reference given is to Tillmanns' "Allgemeine Chirurgie." In the seventh edition of this work, published ten years ago, Professor Tillmanns said Credé recommends this metallic silver, internally, by inunction or by intravenous administration, in the treatment of phlegmonous lymphangitis, general septic infections, in scarlet fever, diphtheria, etc. He then immediately said "no conclusion can yet be reached in regard to the internal antiseptic action of the silver in general infections. I have repeatedly seen surprisingly good results, in other cases it could not be determined that there was any effect." As to later editions of his work, we can not find that there was any eighth edition of the "Allgemeine Chirurgie," though there was one of the "Specielle Chirurgie." In the ninth and tenth editions, however, published in 1904 and 1907, respectively, he says what was noted above as to Credé's recommendations and then alters his previous statement by eliminating any personal opinion whatever and simply says that in human cases and in animals some authors have described good results, while with others the results have been negative. That is, in one short sentence the author of the pamphlet has introduced three very objectionable methods of misleading his readers, methods which are very commonly used in such advertisements.

1. He has used an obsolete edition of the author's work that contained a clause (which the author had deliberately removed from later editions) because this clause could be dressed up into more laudatory form than any in the later editions. This suppression of an author's recent opinion because an earlier one seems more favorable we shall mention in another connection in a still more objectionable form.

2. What Tillmann said ten years ago as to his own opinion is combined with what he said as to Credé's recommendation of the substance, and it is all referred to Tillmanns.

3. A single clause that even in the original (in the ten years' old edition) is guarded in such a way as to make it a most indifferent opinion as to the actual value of the substance is taken out from the context and put into the advertisement in such a form that the author appears to be an enthusiastic advocate of collargol. By using this method almost anything, except violent condemnation of a drug, could be turned into warm praise. It is the more reprehensible because it is one of the commonest ways of misleading readers of advertisements.

Finally, we would note that while the advertisement reads as if Professor Tillmanns had come out with a warmly favorable discussion devoted to collargol, we actually find that all the matter that we have referred to is merely a mention of the substance in fine print, after he has mentioned twenty-five other substances which have been recommended by various authors as substitutes for the usual antiseptics; and when, immediately afterward, he takes up the question as to which of the numerous antiseptics that have been recommended is the most effectual and suitable, he does not even mention collargol, and in discussing the prevention and treatment of septicemia he again does not mention it, but does say "A substance that is an effectual remedy for general septic infection does not exist."

ITS VALUE IN PUERPERAL INFECTIONS

In relation to puerperal infections, let us take up several of the first references given under this heading (p. 13), which are said to attest the effectiveness of the substance in these conditions. The article mentioned as coming from Chrobak's clinic is by Buberl. It is quoted specifically in certain other connections and, as we have already shown, it is falsely quoted in connection with excretion through the urine, but the following statements are not quoted: He says that the reports regarding the clinical effects of collargol are partly positive and partly negative, a guarded expression being given by exactly those authors who have the largest amount of material at hand; and he then refers to Fehling, v. Herff, Küstner, Leopold, Osterloh, and v. Rosthorn as being examples of this latter class. Buberl's own work indicated to him that it appeared at times to exert a favorable influence on the course of puerperal fever, but that it is to be considered a specific against sepsis seems, from his experience, to be altogether too enthusiastic a statement.

Döderlein, referred to also, says, on page 43 of his book, simply that it has been recommended that metallic silver be used in impregnating ligatures. Later, on page 161, he says, in discussing the after-treatment of infected wounds: "Here silver in colloidal form and silver salts, used in intravenous infusion or in inunctions, have been recommended by Credé. The experimental basis of this Credé silver treatment is, however, but slight, for no results that are free from criticism have been obtained in animal experiments; though it might be said regarding these observations that perhaps bacteria of too high a virulence have been used for injection, and because of this even an increased power of the blood to check their growth was insufficient. Clinical reports, both with intraveneous and intradermal use, have not been unfavorable. We have ourselves very frequently used the inunction treatment without being able to reach any conclusion regarding it. Unequivocal results that strike the eye at once I have never seen."

As to Fehling, the reference is to a society report, in which it is merely stated that he had good results from the use of collargol. When the actual article by Fehling is looked up[2]—an article to which reference is not given in the index of literature in the pamphlet—it is found that he states that the substance had no bad effect, but the results were very variable. Sometimes the temperature and pulse fell; they generally improved; but there was no definite permanent fall of the temperature after the injections. As to whether any cures were due to its use, he says that he feels extremely guarded. A number of patients died and a number got well. Possibly the bad issue was sometimes postponed. Further clinical studies should be made to determine its value, but he thought it worth while at that time to continue testing it.

Harrison is correctly quoted as saying: "If one does not use collargol in those severe forms of infection, one has not done one's duty." This extremely pronounced view does not appear to us to be based on much experience. In the references given Harrison reports, so far as we can see, only two—or, at most, three—cases, one of these being from the notes of a hospital resident physician. In one of these it appears that collargolum was unable to prevent the advance of the general sepsis and the formation of an extensive local abscess and arthritis, and the condition improved only after the abscess had been opened and drained. Nevertheless, collargolum is lauded because the abscess cleared up with great rapidity after having been opened.

Osterloh, who is not referred to in the advertising matter of Schering and Glatz, though repeatedly mentioned in articles that they do quote, says[3] that he had already shown the uselessness of the ointment in severe sepsis, and then describes some cases in which he used intraveneous injections with apparently favorable influence on the temperature but no influence in controlling the disease. Three patients died and the others recovered only after the silver treatment had been stopped and other suitable surgical treatment had been instituted.

COLLARGOL IN ARTICULAR RHEUMATISM

Witthauer is very favorably referred to in some typewritten sheets[4] sent to the committee by Schering and Glatz. He had previously reported in a laudatory way in regard to the use of the substance in puerperal pyemia, and states that he has recently used it in articular rheumatism. He describes a series of cases in which he thinks the results were very good; but he makes the naive statement that if a case does not improve under the use of this substance, one may decide that either it is gout or a mixed form of arthritis, or that there was some complication present that prevented the action of the collargolum. He states that there were cases that he does not report in which "collargolum did not work so promptly and so strikingly, becaused mixed infections were certainly present, and new complications persistently appeared." Evidently this author modifies his diagnosis directly in accordance with the effects of collargolum, which makes his conclusions more than a little unreliable. In connection with its supposed action in pneumonia it is interesting to note that Witthauer supports his contention that it acts *in the right kind of rheumatism* by showing that in a case that it did not help the patient developed pneumonia while it was being used. He considers the pneumonia responsible for its lack of influence on the rheumatism. He also says that true streptococcic articular rheumatism may be successfully treated with collargolum, and may even be diagnosed through the collargolum treatment, because the latter is always effectual in this condition. This is rather too much of a discovery. There has been no determination as yet that articular rheumatism is definitely a streptococcic disease. To make a diagnosis of a condition by a therapeutic test before the existence of this condition is known to be a fact is surely a remarkable feat.

In the same number of the same journal, however (this is not mentioned by the promotors of the drug), Jung, writing from the Frauenklinik in Greifswald, after speaking of various measures used in the treatment of puerperal sepsis and mentioning antistreptococcic serum encouragingly, says: "The experiences with Argentum colloidale Credé in puerperal sepsis have been less favorable. In regard to this substance also there are a great number of favorable, but likewise some unfavorable, reports, and in our experience in Greifswald it has not proved satisfactory. We have, as have many other observers, repeatedly seen high access of fever and severe chill appear first after its use." After describing the disadvantages attending on its intravenous use, he says: "These difficulties make the procedure seem but little suited to the use of the practitioner, and, furthermore, as already noted, we have not had any favorable results to record. The percutaneous use of collargol, which was earlier practiced, has proved to be entirely without effect and is indeed very generally discarded."

Lenhartz, who wrote on sepsis in Nothnagel's "Specielle Pathologie u. Therapie," and whose authoritative article is repeatedly referred to by others who are quoted in the pamphlet, though not given in the list of literature in the pamphlet, states: "Whether colloidal silver, recommended by Credé, promises any permanent cures I hold also to be very doubtful. However, it appears in the dose ordinarily used to be harmless. Wenckebach considers that after intraveneous injections of 12 to 15 mg. of the silver in 1 per cent. solution good results were seen. For myself, after many personal experiences, I can not confirm this favorable action." Again, in speaking of its use in puerperal sepsis, he says: "We ourselves have seen nothing worthy of comment as a result of its use."

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[2] München. med. Wchnschr., 1903, p. 1409.

[3] Wchnschr., 1902, No. 21, p. 896.

[4] Med. Klinik, 1907, No. 42.

ITS UNTOWARD EFFECT

The opinion that it causes no dangerous effects is not shared by everyone. Rittershaus[5] is correctly referred to in the pamphlet as describing such good results in erysipelas that he thinks it must be looked on as having a directly healing influence in this condition; but no space is given to another article by Rittershaus, written a year later (the authors of the pamphlet are evidently familiar with this article, because they index it in their list of the literature), in which Rittershaus says that, after further experience and further consideration, he would note that he has repeatedly had periphlebitic infiltrations and abscesses formation as the result of intraveneous injections, and has repeatedly seen severe cyanosis and dyspnea immediately after its use, which *probably indicated embolus of the lung*. He also frankly notes that his more mature opinion is that the effects in erysipelas and pyemia are by no means so valuable as they at first seemed to be. While it appeared to have an influence in some cases on the temperature, general condition and local disease, he believes that it is impossible to attribute much effect to it because of the great variability of the ordinary clinical picture of such conditions, and he frankly states that, contrary to his previously expressed opinion, he thinks that up to the present no specific against erysipelatous conditions has been found. As to general septic processes, he would repeat the statement made in his previous paper, that no permanent results were obtained from the use of collargolum in these conditions.

Hochheisen is quoted most extensively in connection with its use in puerperal conditions. We would note one point as regards the quotation from this author; the first sentence as given in the pamphlet is: "Collargolum is an invaluable aid in suitable cases." A correct translation of Hochheisen's words here is: "Collargolum is an aid in suitable cases." Again there appears to have been a spontaneous generation of a word, which we can scarcely consider justified even for advertising purposes, since this is a direct quotation, in quotation marks.

Bonnaire and Jeannin,[6] who are considered by Schering and Glatz to have given an entirely convincing contribution concerning its effect in puerperal sepsis, make twice a statement that appears to us to be in strong conflict with the attitude of the pamphlet, in that they say that the only active way of using the substance is intravenously. They then give a series of cases in which they used it, in 46 of which the patients actually had some disturbance of temperature. etc., after childbirth. In 3 of these the result was unknown; 10 patients died and 33 recovered. There is no evidence that many of these patients had actual septicemia or pyemia, however, and the authors themselves, while favoring its use, say that one should abandon the chimerical hope that we possess a therapeutic agent that is able to stop an infection that is in full evolution; and they state that even if collargol simply aids in gaining time, through its influence on the general condition, but permits an infected woman to traverse the period of danger, stimulating the reaction of the organism in a favorable way, providing periods of freedom from fever "which depresses the patient, takes away appetite, disturbs sleep and produces headache and causes delirium, it must still logically be accorded a large share in a happy outcome." Its effects are only transitory, and the dose must be frequently repeated, if the drug is to be of any value. Now all this may be true or it may not, but it does not sound to us like the description of a specific against puerperal or other infections. It is indeed a rather vaguely cautious statement, and it would appear that since his first paper which is referred to in the pamphlet Bonnaire has become more guarded in his views as to the efficacy of the drug.

ITS USE IN CEREBROSPINAL MENINGITIS

Under "cerebrospinal meningitis" the pamphlet refers to a considerable series of authors; but it is somewhat illuminating to find that the whole number of cases reported by these men is extremely small, several mentioning only one case in which collargol was used. In most instances the diagnosis was not established by any reliable means. We would contrast two statements that we think are illuminating. One is the following, which we quote from the pamphlet marked "B," p. 20, where an article by Bjorkman is given in extenso. The quotation opens in this way:

> "In my own experience I have met with great success in meningitis from the combined treatment with silver inunctions (Credé) and antiseptic packs on the skull. In some instances the suppuration took an outlet through the nose and ears; . . ."

If this really occurred, as the result of the use of collargol or anything else, we should have profound confidence in its activity, indeed we should stand in awe of it; but we are inclined to hold in mind the statement of Dr. Jacobi, who says, in an article from which the pamphlet quotes (though this statement itself is not quoted) that in cerebrospinal fever collargolum had no action.

We would also note that, though Dr. Jacobi is repeatedly referred to as expressing a hopeful view regarding the use of collargolum, the pamphlet entirely suppresses the guarded statements with which he surrounds the hopeful statements. In speaking of Credé's silver preparations, he makes these remarks: "His followers are sometimes more enthusiastic than he is himself, though his own convictions approach sometimes a fervor of fanaticism," "The careful practitioner, who has seen many rockets to rise like stars and descend like sticks, will do well (to judge from what I have seen myself) to try the colloidal silver for what it is worth. We have all been looking for a soluble antiseptic which would kill cocci and toxins without harming the tissues. In this drug we are promised such a material. We are not bound to accept the dicta of enthusiasts, bent on writing an article which will carry their names through the ephemeral literature of a brief half year." In the other article referred to in the pamphlet, in speaking of these and other substances, Dr. Jacobi says: "I mention them without claiming prophetic gifts. They may be highly valuable, though whoever looks for a panacea is always mistaken."

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[5] Therap. der Gegenw., 1904, p. 305.

[6] L'Obstetrique, April, 1908.

It is, perhaps, natural that Schering and Glatz should have omitted also the following quotation from Forchheimer.[7] The article is, however, referred to by them. In speaking of the use of collargolum, he says that he began with a prejudice against it "on account of the fact that so distinguished a man as Credé had surrendered to commercialism." Dr. Forchheimer, at the end, gets only so far as to say that he does not unreservedly advise the use of this ointment but considers it worthy of a trial in so severe a condition as septicopyemia.

COLLARGOL IN ENDOCARDITIS AND INFLUENZA

In regard to endocarditis, the name most distinguished among those mentioned in connection with cardiac conditions is that of Wenckebach. The rest of the world, perhaps, will be inclined to think that he is overenthusiastic in his title, "An Effective Treatment in Septic Endocarditis," when we find that he has treated a large series of cases, and says that two, he thinks, are convincing and describes these, but that the other cases he will not mention because they are less convincing! One at least of the two that he describes certainly ran a course that has many times been seen when no supposedly antiseptic treatment was being used in this disease.

Under influenza, reference is given to an article by Afanasjeff, who is stated to believe that collargolum has a specific effect on influenza infection, and his article is given in full in one of the pamphlets. One case is the evidence offered by him to prove that we have a specific. Rommel likewise is quoted as showing the profound influence of the substance in influenza, measles and other conditions. He actually describes only one case (that one is erysipelas), and then makes vague general statements about other conditions, and in a most laudatory way recommends the drug in almost all kinds of conditions; but he does not *offer any evidence* as to the correctness of his views.

ITS USE IN GENERAL MEDICAL CONDITIONS

It is stated in some typewritten matter sent to the committee by the agents, under the heading "In Medicine" (referring to its use in medical conditions): "The most exhaustive investigations are those of Professor Netter[8] on the very large material in the Hospital Trousseau of Paris." "Exhaustive investigations" seems a somewhat liberal term when we find that in the last of these two references Professor Netter gives as his most important experience the following: Nine cases of pneumonia, 9 of typhoid fever, 14 of bronchopneumonia of all kinds, and 4 of scarlet fever, together with 37 cases of diphtheria; and the effects in typhoid fever that he describes are not made more convincing by the fact that, while he does not mention this himself, he finds it necessary to use in the second paper the same chart that he used on page 1111 in the preceding paper to demonstrate its influence on the temperature in typhoid fever. Moutard-Martin, in discussing Netter's first paper (a fact, again, that it not quoted in the pamphlet), said that the effects described by Netter are not at all convincing of the value of collargolum; they are certainly often seen without its use, even the effects supposedly shown in the twice-used typhoid chart. Professor Netter's enthusiasm incidentally goes far beyond even the indications outlined in the pamphlet. He believes that he has used the substance with most beneficial results in gastrointestinal conditions and a variety of nervous disorders, including neurasthenia, hysteria, central nervous scleroses, epilepsy, etc. Indeed, according to him, collargolum would very narrowly escape being a panacea, for there are few pathologic conditions that would not be cured by it if we follow his view.

We would also note, in regard to another important disease, that Baginsky, whose article is, as we have said, incorrectly quoted in another connection, says (a fact that is not quoted) that he treated with collargolum thirteen patients with severe scarlet fever and ten died. The non-fatal cases were not very malignant, and he considers it probable that recovery would have resulted under a simple dietetic treatment. He also notes that collargolum did not prevent complications in any of these cases, one developing otitis media, another nephritis, and the other an infection of the face. He reaches the final conclusion that "the attempt, then, to influence scarlet fever favorably with Credé's ointment failed in every way." This statement from so distinguished an authority is certainly sufficient to offset the general statements, without specific details, that are quoted from others.

COLLARGOL IN DIGESTIVE DISORDERS

In connection with the digestive disorders of children, it is stated in the pamphlet that Professor Schlossmann "advises 1 per cent. collargolum in sweetened milk when an intestinal antiseptic is needed." Since Schlossmann's name carries weight, we looked this point up. We find that what he actually says is: "A critical decision whether any improvement was due to the medicament or to the rational diet that was, of course, instituted is extremely difficult; but I think that I may recommend colloidal silver to those colleagues who have the slightest faith in the use of intestinal antiseptics, because, while it has decided antiseptic properties, it is entirely non-poisonous." In other words, if one believes at all in the use of intestinal antiseptics (and Schlossmann does not say that he does, but rather intimates that he does not), one may try colloidal silver, because it is not likely to do any harm when given by mouth. This is certainly a different expression of opinion from that indicated by the statement made in the pamphlet.

It appears, however, unnecessary to multiply these references further. In relation to the clinical side of the question, matters seem to stand much as they do in relation to the pharmacologic evidence. There are, of course, many favorable expressions of opinion from clinicians; but there are many guarded or unfavorable opinions, some of which we have quoted. It is, as we have said, a matter of history that nearly any drug that has been widely advertised has had many enthusiastic advocates for a time, whatever its actual value. As to this drug, most of the authoritative writers whose articles we have seen have, at best, a guarded, and not infrequently an unfavorable, opinion. Many who have written in recent years (and this includes a number of those who are mentioned by Schering & Glatz as having presented some of the best evidence of the value of the drug), if they express an opinion on this point, consider collargolum nearly or wholly valueless unless used intravenously; and we repeatedly find the statement from those of widest experience that the effects

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[7] Cleveland Med. Jour., January, 1902.

[8] Bull. et mém. Soc. méd. Hôp., Paris, Dec. 18, 1902, Jan. 22, 1903.

In spite of this, the remarkable claims mentioned in the beginning are made in the most recent pamphlets as if they were beyond question, and all modes of administration are recommended except the subcutaneous. The latter is excluded only because of the likelihood of its producing local trouble.

Collargolum is also emphatically said to be harmless, whereas severe chills and marked rises of temperature after its use are mentioned by numerous authors. Such results certainly can not be said to be harmless. A number of writers mention severe infiltrations, and even abscess formation, from its intravenous use; and still more disquieting effects are described, notably by Rittershaus, who reports, in a number of cases, symptoms that indicated so alarming a condition as pulmonary embolism. Similar cases are mentioned by other authors.

CONCLUSION

We have presented sufficient evidence that there are gross exaggerations in the statements that were quoted in the beginning of this report, from the covers of the most recent pamphlets. In addition, we have shown instances of directly false and also of very misleading statements. These latter facts, even more than the exaggerations, have made us feel it incumbent on us to make a frankly adverse report. Until these practices have been entirely abandoned collargol appears to us to lie beyond the pale of scientific inquiry, for the latter, which is the search for truth, can not thrive in an atmosphere of falsehood or even unfairness. The question whether the substance itself has any intrinsic merit can not be approached at all scientifically until it is approached in the spirit of truth, frankness and fairness. The manufacturers and those who profess faith in the remedy should, more than any others, be interested in removing it from its present false position.

TYPICAL PROPRIETARY EXAGGERATION

In concluding, we wish to emphasize the fact that these remarks do not apply solely to collargol or to Schering and Glatz. All that we have said really illustrates conditions that, unfortunately, are all too common. The cry that this is a "common practice" is frequently made in extenuation. In our opinion, this is all the more reason why such practices should be exposed and condemned whenever and wherever they are found. So long as they prevail the claims advanced in all advertising matter must be considered with the greatest caution, if not with skepticism.

There are, however, two lamentable facts that are especially illustrated in the present instance. The first of these is that a large array of literature, quotations and references are misused to obscure the very views that the authors of advertising pamphlets pretend to present. It is, for instance, directly claimed by Schering and Glatz in their correspondence that the "over 300 references" mentioned in the pamphlet *substantiate the claims* made for collargol. As we have seen, this is very far from being the case, and in many instances they do directly the contrary. This, as well as the other misrepresentations and misquotations, implies a confident belief — unhappily too well justified — that most doctors are either too busy or too impressionable to verify such quotations by actually reading the original sources. Even a fairly ambitious inquirer would be effectively deterred by the seemingly hopeless task of reading 350 articles. The use of the names of widely known authors further serves to quiet any doubts of the reader and deter him from making a more accurate investigation of these claims, for most men would look on it as inconceivable that any one should have the presumption to misrepresent the actual views of such authors. The average physician has considerable confidence in the better pharmaceutical houses, and the abuse of this confidence is a serious matter—most serious of all to the pharmaceutical interests; indeed, on their part it would appear to be nothing less than suicidal.

We again disclaim the intention of singling out the firm of Schering and Glatz for criticism, though our present duty is confined to their pamphlets. On the contrary, we would urge that it is advisable and, indeed, necessary that in all instances in which remarkable claims are made the original sources on which these are based be carefully examined, whatever the substance may be and whatever firm makes the claims. We would, indeed, hold it to be an important duty of the Council to undertake such investigations in connection with any product that has been provisionally accepted, as well as with those that may be submitted in the future. The exposure of such practices, when they exist, is to the common benefit of all. We should consider that whoever has good reason to believe that such misrepresentations exist in connection with any substance can give material assistance by transmitting his information to the Council: and we would also hold that any person is remiss in the duties that he owes to the profession and to the public if he does not take such action and permits these practices to go on without doing his part to check them.

The other unfortunate fact is that while it would in some ways be very helpful if physicians could openly express their opinions in print in regard to proprietary articles in order that the good might be sifted from the useless or harmful, it is clearly very dangerous for anyone to attempt this now, for no matter how free from commercial interest in the product that he is discussing he may appear to be, anyone is always in danger of having his views, and even his very words, distorted, misconstrued, suppressed, or added to, in ways that will fit the purposes of subsequent advertisements of the drug. We thoroughly agree as to the desirability of the impartial scientific investigation of promising drugs; but we are convinced that the practices to which we have just referred are the main, if not the sole obstacles to such investigation.

We have gone into the task that you set us to a greater extent than its individual importance warranted, because as we investigated it more extensively it constantly appeared to point more clearly to an important moral that is not yet sufficiently appreciated: Advertisements of proprietary articles are usually *not even intended* to present scientific facts but, rather, the biased views or wishes of the owners.

Respectfully submitted,

J. T. Bottomly,
C. W. Edmunds,
Reid Hunt.
David L. Edsall, Chairman,

MINORITY REPORT OF THE COMMITTEE

To the Council on Pharmacy and Chemistry.

Gentlemen:—The question presented to the committee I understand to be the following:

"Does the advertising matter in relation to collargolum submitted by Messrs. Schering & Glatz, contain exaggerations or misquotations of such character that the Council should require their withdrawal before approving the product?"

As to this, I find, in substantial agreement with the majority of the committee, that the advertising matter of Messrs. Schering and Glatz is misleading, both through exaggeration and through misquotation. It makes a number of positive assertions concerning the pharmacologic and therapeutic properties of collargolum for which conclusive evidence is lacking, and modifies the opinions of some of the authors cited, by addition as well as by omission.

The practice thus illustrated—a practice which, unfortunately, is widespread among the manufacturers of controlled medicinal preparations, including some which have been accepted by the Council—even when fairly attributable to carelessness, rather than to evil intention, is not to be condoned. On this point I have no difference of opinion with the majority of the committee.

Physicians, pharmacists, and especially the editors and proprietors of medical and pharmaceutical journals, are not, however, without a large measure of responsibility for the inception and development of this evil, and in assuming the attitude of judge or prosecutor, the American Medical Association must not lose sight of its former position as culprit. It is to be hoped that the increase of knowledge, no less than the stricter enforcement of ethical codes by medical and pharmaceutical societies, will bring about amendment among professional men. As to pharmaceutical manufacturers and distributors otherwise of good repute—such, for example, as the offenders in this particular instance—may we not expect that the censorship of the Council on Pharmacy and Chemistry and the pressure of public opinion will direct their attention to the matter so strongly that, not in mere obedience to these extraneous influences, but because of their own recognition of their very grave responsibilities, scientific and moral, they will hereafter exercise the necessary care in the preparation and supervision of their advertising?

On the contradictions in the advertising matter I lay less stress than do my colleagues, being mindful of the contradictions that would be evident did we assemble the reports, experimental and clinical, by recognized authorities, concerning some of the oldest and most important remedial agents.

On some of the other questions incidentally raised in the report of the majority of the committee, and with much of its criticism and comment on individual observers, I reluctantly find it necessary to express dissent.

This dissent is not based on a personal prepossession arising from clinical observation of good results from the use of colloidal silver—for I agree with the majority of the committee that in an investigation of this kind personal views should be set aside. I look, perhaps, from a different viewpoint on the experimental and clinical evidence submitted. As, however, these matters have no immediate bearing on the particular question submitted, and some aspects of the discussion would lead us far afield, I do not wish to take the time or space necessary to particularize. It is sufficient that I agree with the main conclusion, even though I can not adopt all of the reasoning of my colleagues or endorse all the views incidentally implied or set forth in their report.

PHARMACOLOGIC ACTION

In regard to the immediate matter before us, a further word is necessary. It is possible that the ordinary reader might infer from the majority findings that colloidal silver is devoid of pharmacologic action and of therapeutic value. It is true that the report does not say this, and I have no reason to believe that the majority of the committee wishes to imply it; yet to avoid misunderstanding I must enter on this point an explicit disclaimer. My own finding is that the pharmacologic action of colloidal silver is undetermined, and that while a number of ingenious conjectures have been made, with more or less plausibility, and even probability, the experimental evidence is not as yet sufficient to warrant any positive conclusion. This opinion applies as well to the experiments conducted by Dr. Anderson on diphtheria toxin as to those of Hamburger and others criticised by the majority of the committee; that is to say, Dr. Anderson's result demonstrates that under the conditions and to the extent of the experiment, collargolum is without neutralizing or destructive power on diphtheria toxin; but it would require a larger number of experiments, of many kinds, under varying conditions, and with different forms of toxin, to warrant either a general negative as to all infections, or a positive assertion as to any. On the other hand, I can not consider the fact of the absorption of the drug from the gastroenteric tract at all doubtful, though the form or manner in which absorption takes place is not yet established; neither is the usual increase of peripheral leucocytes doubtful, though the significance of this fact remains to be determined.

THERAPEUTIC VALUE

In regard to the clinical reports, I agree with the majority of the committee that very many of them are lacking in those exact details of observation which alone permit a reader to draw conclusions as to the correctness of the diagnosis and the true influence of the remedy. This does, not, however, of itself warrant us in casting suspicion on the honesty or the competency of the observers or in disputing the correctness of the statements made. It simply leaves the matter unproved. All clinicians are aware that certain conclusions impressed on them from observation of the progress of individual cases can not be so set forth, even in the most detailed and exact reports, as to convince others. And this will continue to be so while therapeutics remain an art rather than an exact science. Furthermore, as the majority of the committee truly points out, highly colored and optimistic — even absurd — reports are apt to be published concerning all drugs. This has occurred and will continue to occur in relation to the well established remedies of the Pharmacopeia, as well as concerning the newer legitimate remedies, and the nostrums and frauds, old and new. It is, however, as illogical to draw unfavorable conclusions from reports of this character as it would be to base favorable opinions on them. Cheiron, the wise centaur, is as fabulous as the contest of Athene and Poseidon; but the horse is, nevertheless, a very useful animal. All that can be done with reports which are lacking in exactitude and sufficiency of detail, whether from unknown writers or writers of authority, is to set them aside. We have, then, to consider such reports as may be sufficiently precise to permit analysis and conclusion and such generalizing expressions of opinion as may, from one reason or another, be of sufficient weight to arrest attention.

Without specifying, I find that among the reports and opinions submitted in relation to collargolum, there is a sufficient weight of trustworthy evidence to indicate for it—a limited field of established usefulness, and beyond this the possibility of a larger field needing accurate survey. In the very general way in which medical literature at present employs the term *"indication," it is* justifiable to say that the drug is "indicated" under certain conditions, which can be derived from a study of its genuine literature, and which it is not the province of this report to point out.

I should like to add a few lines concerning a larger question suggested by the present inquiry: It is to be regretted that as yet no satisfactory method has been devised by which the manufacturers of controlled preparations may enter into an arrangement with observers of competence and scientific standing for the prosecution, experimentally and clinically, of the exact researches necessary to establish the pharmacology and the therapeutic advantages and disadvantages of their products. The fact that a preparation is controlled removes it, as a rule, from the field of general scientific endeavor in which investigators may be moved to labor for the advancement of knowledge; while under present conditions, observers of the character indicated are, for the most part, unwilling to undertake such observations *as a matter of professional employment. If, however, an* analytical chemist may properly be employed and paid for work in the line of his profession, there is no reason why a pharmacologist should not accept similar engagements. If the chemist or the pharmacologist is expected to make an imperfect or untruthful report, then the bargain is, of course, dishonest; but if the chemist or pharmacologist is, as here assumed, employed simply to ascertain and report the facts, the employment is an honorable one and to be commended.

I need not here recall the arguments I have repeatedly made against the policy of "control" or monopolistic "proprietorship" in the agents of materia medica. So long, however, as it continues to exist under the laws of the United States, the situation which it creates must be recognized. Either through the medium of some special public association, or through the medium of the Council, there should be brought about a condition which will permit manufacturers to employ experts for the determination of the pharmacologic and therapeutic actions of their *preparations, without loss of* professional standing by the clinicians or experimenters who may accept such employment.

In the case of collargolum, it is my opinion that, while the investigations hitherto conducted have not been sufficient to establish the claims made by the proprietors of the drug, or to decide either positively or negatively as to its possession of the properties which have been conjecturally ascribed to it, a more extended investigation, taking up in a systematic manner the various points necessary for such determination, is desirable. Until such an investigation has been conducted and concluded, the matter must remain in doubt, and the advertising matter of the proprietors should discriminate, as it certainly does not now discriminate, between probability and certainty, conjecture and demonstration, plausibility and proof.

In regard to one portion of the report of the majority of the committee, I must register a specific dissent. I am not willing to put impute to improper motives the inclusion in the advertising bibliography of references to reports and observations unfavorable to the drug. That such reports and observations are not "featured" by the advertisers — an omission in which these promoters are, unfortunately, not unique -- is simply an additional illustration of the evils inevitably resulting from the present system of private control of medicinal agents. *The inclusion of the* references in the published lists of papers is to be commended rather than condemned, but would have been more commendable had the advertisers indicated the character of the reports.

Respectfully submitted,
Solomon Solis Cohen.

OPHTHALMIA NEONATORUM AND ITS PREVENTION

REPORT OF THE COMMITTEE ON OPHTHALMIA NEONATORUM OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

F. Park Lewis, Chairman, Buffalo, N. Y.; C. A. Harper, Madison, Wis.; H. D. Pease, Albany, N. Y.

In almost all parts of the world it is the universal experience that the chief local cause of blindness is still pus infection of the eyes of new-born children. Yet it was more than a quarter of a century ago that the careful and scientific experiments of Carl S. F. Credé, then widely known as a successful obstetrician of Leipzig, gave to the world a prophylactic at once simple, safe and inexpensive, which if it had since that time been universally employed would have saved the eyes of numberless thousands who because of this neglect have passed their lives in darkness. There is no doubt whatever that through the unremitting efforts which have been made by physicians and others, and more especially during the last few years, the number of infections due to this cause, and consequently the amount of blindness resulting from these infections, has been materially diminished. But it is equally a fact that large numbers of cases occur having the most disastrous results which are never seen by physicians at all and of whose existence we are aware only when statistics are sought as to the cause of blindness.

REPORTS FROM SCHOOLS FOR THE BLIND, 1907

Schools for Blind.	New Admissions. No.	Blind from Ophth. *Neonatorum.* No.	%
New York State School for the Blind....	13	4	30.7
Penn. Institute for the Blind, Overbrook, Pa.	27	9	33.33
Institute for the Blind, Austin, Texas....	(Not definite—about 10)		
Perkins Institute and Mass. School for the Blind	43	13	30.00
Colorado School for the Blind, Colorado Springs	7	3	42.8
Western Penn. Inst. for Blind, Pittsburg, Pa. (P'c'tage of total number in school, 31.37)	28	8	28.57
Missouri School for the Blind, St. Louis...	19	6	31.57
State Board of Education for the Blind, Hartford, Conn. .... (Since creation of board in 1893, 34.74.)	8	1	12.50
State School for the Blind, Columbus, Ohio (Reduction of usual percentage and as low as at any time in last 12 years.)	25	6	9.83
Maryland School for the Blind.......... (Percentage of total number in school in 1905, 25.50.)	13	4	30.77
Ontario Inst. for Blind, Brantford, Ont... (Percentage of total number in school, 24.7.)	23	5	21.74

How general the ophthalmia of new-born children is and what results follow it is in this country exceedingly difficult to determine. It is known only that it causes a large amount of infantile blindness. Just how much blindness is due to this cause is not exactly known. Statistics are lacking to a singular degree, but that it is still appalling is shown by the report of the Committee on Ophthalmia Neonatorum recently presented at the meeting of the American Medical Association. Letters were sent to the superintendents of the various state schools for the blind with the request that the number of cases of blindness due to ophthalmia neonatorum of those who had been admitted to the school during the fall of 1907 be reported to the committee. From those in which trustworthy reports were received the rather startling figures shown in the above table were obtained.

The average, then, of the new admissions in the fall of 1907 to the ten schools in which exact records were kept and representing eight states and the province of Ontario was 28.69 per cent., or over one-quarter of the whole number, needlessly blind.

That these are not unusual results is shown by the following report from the Pennsylvania School for the Blind for the past eight years:

Year.	No.	%	Year.	No.	%
1900—Out of 25....	11	44	1904—Out of 56....	15	25.00
1901—Out of 26....	10	35	1905—Out of 42....	21	50.00
1902—Out of 39....	9	23	1906—Out of 38....	12	31.00
1903—Out of 30....	14	50	1907—Out of 27....	9	33.33

The average percentage of these eight years is 33.36 per cent. of the whole number admitted. As this enormously high proportion of blindness due to ophthalmia neonatorum is found in states maintaining the highest standards of medical education and general sanitation, there is no doubt whatever that when exact statistics can be obtained at least as large a percentage due to this cause will be found elsewhere throughout the country.

While the ophthalmia of the new-born is exceedingly infectious and therefore avoidable, there seems to have been no concerted effort on the part of the health authorities to determine just how frequently it occurs, under what conditions it may be looked for, or how the eyes of the new-born child may be adequately protected. Attempts have been made by authorities elsewhere to determine these questions. N. Bishop Harmon, the most recent English authority on the subject, says:

"Ophthalmia neonatorum bulks large in our minds, not because it is exceedingly common among us, but because its consequences may be and frequently are extremely serious — blindness or partial blindness being too often the result of its attacks. Almost all observers agree that the disease is much more frequent among the very poor and neglected than among all of the rest of the community combined."

Among 9,630 births in an average London district where no germicide was used as a routine prophylactic there occurred within the first few days of birth seventy cases of purulent discharge, or 0.72 per cent. of the whole. In four cases eyes were lost or damaged. One child had corneal nebulæ (scars), one lost one eye, and two lost both eyes. After giving such statistics as are obtainable Mr. Bishop says: "These figures point to the conclusion that in London among every 100 children born one child suffers from purulent inflammation of the eyes in the first few days of life, and that of every 2,000 children born one child is blinded by this disease." The probabilities are that in our congested centers the incidence of ophthalmia neonatorum may not vary largely from the London figures, but in the absence of exact data any estimate of the proportion of cases occurring in relation to the population is purely speculative. That it should be known there is no question.

The exact method employed by Credé is important and interesting. After experimenting with various antiseptics the eyes of all the new-born children in the clinic, without distinction, were cleansed immediately after birth with ordinary water and then disinfected by means of silver nitrate, 1 to 50. The eyelids were gently separated by an assistant and by means of a glass rod a single drop of the solution was placed in the eye. For twenty-four hours after the application the eyes were cooled by means of a linen fold soaked in salicylic acid, 2 to 100, laid over them. Babies treated in the way described remained free from ophthalmia. A slight hyperemia was not uncommon after the use of the silver drops, and for the first twenty-four hours a rather marked secretion of the eye was sometimes observed.

The figures which Credé adduced were most striking. They were as follows:

USUAL METHODS

Year.	Births.	Ophthalmia.	Per Cent.
1874	323	45	13.6
1875	287	37	12.9
1876	367	29	9.1
1877	360	30	8.3
1878	353	35	9.8
1879	388	36	9.2
1880*	187	14	7.6

* Jan. 1 to May 31.

BEGAN TO USE SILVER NITRATE AS PROPHYLACTIC

Year.	Births.	Ophthalmia.	Per Cent.
1880†	200	1	0.5

† June 1 to Dec. 8.

In the one case in the last six months disinfection had been omitted or there would have been no ophthalmia whatever.

The fact, however, that there is occasionally an irritation of the lids produced by the action of the silver has led to many experiments with other antiseptics, and especially with the newer silver salts, to discover whether equally good results could not be obtained without irritating the eyes of the child. It has been the experience of many obstetricians that weak solutions of the nitrate of silver, while not quite so efficient, were free from this somewhat alarming symptom to those not familiar with its use.

In this connection, however, the recent observation of Professor Greeff of Berlin is of value. He says: "Every case of conjunctivitis gonorrheica, at least that of the new-born, is curable." For prophylaxis he advises a 0.25 per cent. silver nitrate solution. In the treatment, at the Charité, they for a long time have used only 0.1 per cent. of silver nitrate for washing out the eyes, which must be done very frequently. This has given much better results than the stronger solutions. The eye can be saved if lavage is made every couple of hours, day and night, during the first critical days.

Greef asserts that the weaker solutions penetrate into the tissues better than the stronger ones. The irritation produced by the nitrate, too, was occasionally mistaken for an ophthalmic infection which it was supposed it had not controlled, and the silver was then continued at intervals with subsequent damage to the eyes. Young physicians and midwives were in some instances afraid to employ it, as the mothers, knowing nothing of the danger which threatened the child's eyes from gonococcic infection, were apt to believe that the prophylactic had produced an inflammation which would not otherwise have developed, and particularly in those exceptional cases in which ophthalmia neonatorum developed notwithstanding the use of the silver.

It seemed important, therefore, that two things be done: first, that an effective antiseptic be determined on, which could be used without producing silver catarrh, as the resulting inflammation is termed, because while it is in no way dangerous to the child's eyes except in the case of feeble or premature infants or when improperly used, it is important that young obstetricians and midwives shall desire to use it and not fear it; and, second, that prospective mothers and others be advised of the danger that threatens the eyes of the child when *they are not protected in order that the use* of a prophylactic shall be welcomed and sought and not feared.

As might have been expected, a subject of such importance has been most carefully studied and is still receiving most painstaking agitation. The general conclusion, concurred in by both ophthalmologists and obstetricians, is that infections can with almost absolute certainty be prevented, and in the rare cases in which the infection develops, early treatment almost certainly insures its cure. Fuchs, than whom there is no higher authority, says: "If a case comes under treatment in season, that is, while the cornea is still intact, the latter can almost to a certainty be maintained in a healthy state." It must not be forgotten, however, that there is the rarely exceptional case, especially in premature and feeble children, in which infection having once occurred may go on to complete blindness notwithstanding the most skilful early treatment. In order to avoid the irritation produced by the 2 per cent. nitrate of silver solution, however, the consensus of opinion favors the 1 per cent. for general use, which is practically free from this annoyance and is almost as effective as a gonococcocide.

Stephenson, whose recent monograph on ophthalmia neonatorum embodies practically all that is known on this subject, fully agrees with this conclusion. After giving an interesting table, in which silver nitrate in different strengths was used in the eyes of 112,584 children, he says: "It is a curious fact that the percentage of ophthalmia as shown in the above table is lower with the weaker solutions of silver than with the 2 per cent. solution originally recommended by Credé." Since the introduction of the newer silver salts they have been largely used in hospital service and in private practice in place of the silver nitrate. Cragin irrigates with boric acid and then uses a 20 per cent. solution of argyrol. He presents some interesting figures confirmative of the success of this treatment, while Hirst of Philadelphia says that since using a 25 per cent. solution of *argyrol* he had diminished the infections to between 1 per cent. and 3 per cent. of the infants born in between 900 and 1,000 cases. Without presenting actual figures, he says that he thinks that the number of cases of ophthalmia were one-third fewer than when nitrate of silver had been used as a prophylactic. Jackson believes that this indicates an efficiency which may be trusted, but in doubtful cases would still prefer the Credé properly applied. "It is not easy," says Dr. Hiram Woods, who has given much careful study to the question, "to induce from the foregoing a dogmatic conclusion regarding the comparative reliability of the full Credé method and the newer silver salts. The irritative cases due to the silver nitrate are not very common and, while disagreeable and tedious, are not dangerous. Before it can be definitely settled, there must be a comparative study of the prophylactic efficacy in babies born of mothers with known gonorrheal infection." We are justified, meanwhile, in accepting Stephenson's opinion: "On the evidence before me, I therefore conclude that the 1 per cent. solution of nitrate is fully protective and in our present state of knowledge may be regarded as the most efficient solution to employ in the preventive treatment of ophthalmia neonatorum." All these expressions are given to show that while there may be difference of opinion as to the most efficient prophylactic, that protection to an almost absolute degree is possible, and that to secure it would be required: first, great *sanitary care in the toilet of the eyes of the child*; second, the use of some accredited prophylactic; and, third, early and correct treatment when infection occurs.

In this connection the experience of Dr. Snell is not without value. He reports an almost absolute freedom from ophthalmia in the Jessop Maternity Hospital simply by reason of exceeding care given to the toilet of the baby's eyes. "The patients," says Dr. Snell, "are among the poorest; some are inmates of the hospital, but the great majority are confined in their own homes. The midwives have received instructions that immediately the head is born attention must be directed to the baby's eyes. Then with little pieces of lint moistened in tepid water the eyes are carefully washed, as well as the eyelids and parts adjoining. Subsequently in washing the child, care is taken to guard against reinfection. During the last three years there have been 2,242 labors among the in-patients and out-patients. In the first 200 there were a few cases of purulent ophthalmia, but in the last 2,000, since the method has been systematically adopted, not a single case occurred. Directions were also given to the nurses that if a child's eyes looked red it was to be taken at once to the hospital for a drop of nitrate of silver solution to be dropped into the eye." When the eyes become red, however, infection has already occurred. It would be better to anticipate it by a preventive drop.

To secure these measures the cooperation of the public health authorities is imperative. They must be in touch with those who are performing obstetric work, whether accredited practitioners or midwives. Efforts on the part of public authorities to control the effects of ophthalmia neonatorum are not new. As long ago as 1882 the Austrian government issued an edict in which Credé's method was recommended to medical men, and the Austrian regulations impose a penalty on midwives for neglect to call in a doctor in a case of ophthalmia neonatorum. The Hungarian government distributed to midwives in that country a popularly-written treatise on the blennorrhea of new-born infants. In Switzerland similar regulations *have been passed*. In France the Academy of Medicine made recommendations as follows to the French government: First, that in all the registry offices throughout France, with the certificate of birth, short notices be distributed indicating the causes, the symptoms, and the dangers of ophthalmia neonatorum; second, that some measures be taken for the immediate notification of all cases of ophthalmia neonatorum throughout France; third, that an ophthalmic surgeon be attached to all maternity hospitals for the treatment of ophthalmia neonatorum and the instruction of the medical pupils and midwives. In Bavaria the midwife is obliged to carry the 2 per cent. solution of nitrate of silver with her with directions for its use in case of a new-born child, while thirteen of the United States have adopted laws making it compulsory for midwives to give notice of any case of ophthalmia neonatorum occurring in their practice. The health department of Boston passed an act in 1905, of which the following is a portion:

"Should one or both eyes of an infant become inflamed, swollen and red, and show an unnatural discharge at any time within two weeks after its birth, it shall be the duty of the nurse, relative or other attendant having charge of such infant to report in writing within six hours thereafter, to the board of health of the city or town in which the parents of the infant reside, the fact that such inflammation, swelling and redness of the eyes and unnatural discharge exist. On receipt of such report, or of notice of the same symptoms given by a physician as provided by the following section, the board of health shall take such immediate action as it may deem necessary in order that blindness may be prevented. Whoever violates the provisions of this section shall be punished by a fine of not more than $100."

The first essential in any movement of this kind is to secure a public understanding of the conditions and the sympathy and assistance of the people in carrying it forward. The publication through the health bulletins of the dangers attending infantile ophthalmia, and the possibility of its prevention and cure, will do more than any other measure to develop watchfulness and care. The birth certificates would serve as an admirable medium on which to advise all whose duty it is to record births of the danger to the eyes of the child and the means of protecting them.

Dr. J. N. Hurty, state health officer of Indiana, one year ago had printed on each birth certificate the simple inquiry, "Have you used a protective for the eyes of the child?" and he writes that his returns show that 59 per cent. of the physicians in Indiana employ protectives; but how is it with the 41 per cent. and the army of untrained and uncleanly midwives? One intelligent county health officer to whom the necessity for exact knowledge concerning the nature of this disease had come, wrote to Dr. Hurty asking what prophylactic he expected to have used and why. He undoubtedly represented a vast constituency among intelligent medical men. It would be entirely practicable to print on the birth certificate something like the following:

TO PREVENT BLINDNESS IN BABIES

Ophthalmia neonatorum or babies' sore eyes may cause the blindness of the child unless prevented or cured.

Keep the discharge of the mother out of the baby's eyes.

Wipe the baby's eyes with absorbent cotton moistened in warm boiled water as soon as the head is born.

Burn the cotton used; the disease is infectious.

Do not include the eyes in the first general bath.

Drop in the eyes of the child as soon as it is born a 1 per cent. solution of nitrate of silver (or such other prophylactic as may be recommended). This may be obtained from the Department of Public Health free of charge.

For Physician:

Name of prophylactic used————————————

For Midwife:

Was protective used?————————————

A midwife failing to report to the health physician a case of sore eyes in a child which she has delivered will be prosecuted according to law.

Signed by Health Physician.

The ophthalmia of infancy is a borderline disease. Its prophylaxis rests with the obstetrician who is not an ophthalmologist. The disease reaches the ophthalmologist only after it has progressed so far in many instances that irreparable damage has already been done. Consequently the practical physician needs explicit advice as to an eye treatment that under other conditions would be relegated to the eye specialist.

This is peculiarly true in the case of the midwives, who are often afraid, and justly so, to apply any medicine to the eyes without exact information as to its necessity and explicit directions as to the method of use. They should have such explicit directions. They should be instructed by printed leaflets for each in her own language telling how to manage the child's head when it is born to keep infection out; they should be supplied with a chosen prophylactic determined on—whether it be the 1 per cent. silver nitrate, the 10 per cent. protargol, the 25 per cent. argyrol, or the 1/2000 bichlorid of mercury. Midwives should be compelled to report the condition of the eyes when they report the birth, and if like reports were obtained at stated periods, say monthly or quarterly, from all practicing physicians, together with the prophylactic employed, the statistics would be of undoubted value, while the constant reminder coming in the request for the records would so stimulate attention and care as practically to wipe out the disease.

Many attempts have been made by private individuals and associations to limit the blindness due to ophthalmia neonatorum. Leaflets advising mothers and midwives what measures should be taken to protect the eyes of the new-born have been liberally distributed by the Gardner Trust Fund in London. Through the efforts of Emilio Alvardo of Spain like circulars have been spread broadcast by magistrates and priests in whose hands they have been placed for gratuitous distribution, and in this country the New York Association for the Blind has engaged in similar work. One of the best of these is that issued by the Valentine Haüy Society of Paris. It will be given in translation at the end of this report.

There has, however, been no organized and official effort anywhere until the American Medical Association seriously took the subject in hand. In 1906 a committee was appointed for the purpose of determining and putting into practice such methods as would stop this pestilence. This committee is entering now on the third year of its work. It was recognized that effective control of a relatively rare disease in the experience of most physicians and yet one producing so much blindness could be secured only by the combined efforts of the medical profession and the public health authorities. The medical profession is already organized and ready for work. The chairman of the Section on Ophthalmology and the chairman of the Section on Obstetrics of the American Medical Association have each appointed a member from these sections to act with the health officer of their state. They await only the action of the Department of Public Health to make the machinery effective. The Committee on Ophthalmia Neonatorum has made suggestions which are purely advisory. Conditions differ in the various states, however, and methods that seem advisable in one may not be in another. As far as is possible the effectiveness of the work is increased by uniformity of method. Your committee has reached, then, the following conclusions:

Ophthalmia neonatorum is still a most prominent cause of much unnecessary blindness. The efforts that have been made have already lessened its disastrous results in a large degree, but in many instances in which it seems to be infrequent it will be found to be producing blindness among the poorest and most neglected classes. In these the burden on the public treasury is greater because the victims of this neglect become almost inevitably charges upon the state.

The responsibility for the investigation, the recognition and the control of this infection rests on the department of public health. Your committee recommend, therefore, that the conclusions reached by the Committee on Ophthalmia Neonatorum of the American Medical Association be approved by the American Public Health Association, and that whenever practicable the health officer of the state or territory over which he exercises jurisdiction be urged to confer with the committee appointed by the American Medical Association and to inaugurate such measures through the state and its counties for the enlightenment of the people and the control of this disease as may in their judgment seem advisable.

The recommendations of the Committee on Ophthalmia Neonatorum of the American Medical Association are in brief as follows:

1. The enactment of laws in each state or federal territory requiring the registry of births and placing the supervisory control and licensure of midwives in the boards of health, requiring that all midwives be examined and registered in each county and that they be required immediately to report each case of ophthalmia occurring under their ministrations under penalty for neglect if found guilty, of fine, and for a subsequent offense forfeiture of license.

2. The distribution by health boards through bulletins and otherwise, of circulars of advice to midwives and mothers giving instructions as to the dangers, methods of infection, and prophylaxis of ophthalmia neonatorum.

3. The preparation and distribution by the health boards of ampules or other receptacles containing the chosen prophylactic with specific directions for its use. It is advised that the choice of the prophylactic be determined by the health officer with the advice of the committee representing the obstetricians and ophthalmologists for that state from the American Medical Association.

4. The maintenance of proper records in all maternity institutions and other hospitals in which children are born, of the number of cases of ophthalmia neonatorum with the method of treatment and the results. These reports, which should include all cases of scarred cornea as well as of blindness, should be filed at regular intervals with the department of public health and the records published.

5. Periodic report to boards of health by all physicians engaged in obstetrics of the number of cases of ophthalmia neonatorum that has occurred in their practice within a specified time, whether or not a prophylactic was used—if so, what?—together with the result.

As an evidence of the readiness on the part of the enlightened and philanthropic public to assist in any movement so practicable in its nature your committee wishes to call attenion to the work already inaugurated in these lines in the State of New York. A commission having been appointed by the legislature to investigate the condition of the blind of that state reported the existence in the state of a large amount of unnecessary blindness resulting from the neglect of new-born infant's eyes. The New York Association for the Blind, not waiting for official action, secured a sufficiently large sum of money to enable a special committee to carry on the work of prevention throughout the state. This committee, having as its chairman Mr. P. Tecumseh Sherman, a distinguished citizen of New York and former commissioner of Labor, has secured the services of Prof. George A. Hubbell, Ph.D., formerly of Transylvania University, Lexington, Ky., who will devote his entire time to propaganda for the prevention of this unnecessary waste of human eyes.

The medical societies in every state are prepared to cooperate. Resolutions to this end were recently adopted at the one hundred and twenty-seventh annual meeting of the Massachusetts Medical Society, Boston, June 9-10, 1908. It was noted that in view of the work that the American Medical Association is doing in the matter of the ophthalmia neonatorum, and the gravity of the disease, that a committee of five be appointed to consider the treatment of the disease and measures looking to its prevention. The committee was appointed as follows: Drs. Oliver F. Wadsworth, Boston; Frederick E. Cheney, Boston; Francis P. Emerson, Boston; David Harrower, Jr., Worcester, and John W. Bartol, Boston.

The following are the names of those appointed by the respective chairmen, Dr. Wilder and Dr. Dorsett, to represent the Section on Ophthalmology and the Section on Obstetrics and Diseases of Women of the American Medical Association in cooperation with the health authorities of the several states and territories:

STATE.	OPHTHALMOLOGISTS.	OBSTETRICIANS.
Alabama	Samuel L. Ledbetter	W. H. Sanders
Arizona	Ancil Martin	
Arkansas	J. W. Scales	Edwin Bentley
California	J. Bert Ellis	Frank T. Andrews
Colorado	Edward Jackson	W. A. Jayne
Connecticut	H. S. Miles	H. J. Ballard
Delaware	J. A. Ellegood	Frank Bellville
Dist. Columbia	Robert Scott Lamb	Jos. Taber Johnson
Florida	Columbus Drew	E. N. Liell
Georgia	H. H. Martin	F. C. Hodgson
Illinois	Casey A. Wood	Chas. S. Bacon
Indiana	Albert E. Bulson, Jr	Thos. B. Eastman
Iowa	E. R. Lewis	W. B. LaForce
Kansas	Herbert L. Alkire	Francis Harper
Kentucky	F. Manning Brown	Louis S. McMurtry
Louisiana	H. Dickson Bruns	S. N. D. Clark
Maine	E. E. Holt	Fred W. Mann
Maryland	Hiram Woods	W. A. B. Sellman
Massachusetts	Myles Standish	D. H. Craig
Michigan	W. R. Parker	J. H. Carstens
Minnesota	Frank C. Todd	A. B. Gates
Mississippi	James B. Bullitt	J. C. Blackstrom
Missouri	P. I. Leonard	T. J. Beattie
Montana	John A. Donovan	D. Campbell
Nebraska	Harold Gifford	W. O. Henry
New Hampshire	C. B. Hammond	W. R. Garland
New Jersey	C. J. Kipp	Charles L. Ill
New York	Charles S. Bull	Herman J. Boldt
North Carolina	H. H. Briggs	J. F. Highsmith
North Dakota	Henry Beaudoux	F. J. Campbell
Ohio	Mark D. Stevenson	C. L. Bonifield
Oklahoma	J. E. Fowler	
Oregon	J. F. Dickson	W. E. Lewis
Pennsylvania	C. E. de Schweinitz	Jos. Price
Rhode Island	C. W. Van Benschoten	D. Frank Gray
South Carolina	E. F. Parker	E. S. Cathcart
South Dakota	E. O. Miller	
Tennessee	G. C. Savage	R. E. Fort
Texas	J. C. McReynolds	G. E. Cantrell
Utah	Fred Stauffer	F. S. Bascom
Vermont	E. J. Arnold	C. W. Bartlett
Virginia	J. A. White	R. S. Kight
Washington	David de Beck	Wm. M. Hall
West Virginia	T. W. Moore	J. Cannady
Wisconsin	Nelson M. Black	C. H. Mason

TRANSLATION FROM CIRCULAR ISSUED FOR PUBLIC DISTRIBUTION BY THE VALENTINE HAÜY ASSOCIATION, PARIS, FRANCE.

"It has been shown that in France more than one-third of the blind (18,000 in 40,000) owe their affliction to an inflammation of the eyes that followed shortly after birth and which is called the ophthalmia of the newborn. The causes of this disease are well known and may be avoided; when it is once developed it may be cured. It is due to the ignorance and the neglect of the mothers and other persons charged with the care of the newborn child.

1. *Measures to be Taken by the Mother.*—When the woman is subject to white discharges she must consult a physician. *It is these discharges that infect the baby's eyes and cause blindness.*

"2. *Care to be Given to the Child.*—Immediately after the birth of a child, before it is bathed, the lids and the tissues about them must be carefully wiped free from mucus and they should be bathed with pledgets of cotton dipped in a solution of boric acid. The pledgets should be made of perfectly clean and dry absorbent cotton and should be burned after being used. Each time that the child is bathed the eyes should be first wiped clean in the same manner, with the boric acid solution. The hands of the person charged with the care of the child must be washed with soap and dried with a clean towel before the eyes of the child are touched. Everything that is brought near the eyes of the child must be in every instance absolutely clean. The cotton that is used on the eyes of the child must in every instance be immediately burned after it is used. The water, towels, sponges and the pledgets that have been used on the mother must under no circumstances be applied to the child. The air of the bedroom must be kept as pure as possible and the linen should never be dried in the sick-room.

"3. *What Must be Done When the Disease Appears.*—When the lids become red and swollen, are gummed along their borders, when the child sleeps or cries and mattery discharge is mixed with the tears, an oculist or a physician should be called immediately. Each hour of delay adds to the danger. While waiting, bathe the eyes of the child with pledgets of cotton dipped in a solution of boric acid every half hour. Open the lids wide and allow the solution, which should be warm, to flood the eyes and wash out any matter which may have gathered there. The hands should be washed with soap and water both before and after bathing the child's eyes. The cotton with which the eyes have been bathed should be immediately burned. The child should not be fondled and none of the appliances which have been used about his eyes or face should be used for any other purpose. All of those in the home should be informed of the danger of catching the disease by getting the matter into their own eyes. Do not listen to those who say that it will amount to nothing, or to those who say to bathe the eyes of the child with mother's milk, such advice is pernicious and will cause the loss of precious time by delaying the employment of means which might save the sight of the child."

Clinical Notes

A SIMPLE METHOD OF EXAMINING THE LARYNX IN CHILDREN

RICHARD H. JOHNSTON, M.D.
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BALTIMORE

The old or mirror method of examining the larynx in children is crude and often unsatisfactory. Under general anesthesia the tongue is pulled out of the mouth, a small mirror is introduced and an attempt is made to see the larynx. Lucky, indeed, is the examiner if he can catch fleeting glimpses of the pathologic condition. Diagnosis under such circumstances is difficult, if not impossible.

The appearance of the direct laryngoscope was of decided advantage in the examination of children. With Killian's or Jackson's instrument and with the patient's head extended over the edge of the table, a satisfactory view of the larynx can be obtained in many cases. The extended position is a disadvantage, because the muscles of the neck and throat are all rigid and on the stretch and the examiner is in rather a cramped position. Though it is possible to operate successfully in this position, there is danger of injuring important structures.

In the early part of 1908 Dr. H. P. Mosher described some new instruments and "the left lateral position" for examining and operating in the larynx. In the left lateral position the left cheek of the patient is brought near the table and the chin flexed on the neck; the instrument is then introduced and the epiglottis and base of the tongue pulled forward, using the left upper bicuspid teeth as a fulcrum. The advantages of this procedure are at once obvious to those of us who have tried both methods of examination. The muscles of the neck are relaxed; the force used to pull the base of the tongue forward is insignificant; the distance of the examiner from the larynx is much less than in extension, and operative work is thus made easier; and, last, the position of the operator is more natural and comfortable.

The simplest method of examining the larynx, in my opinion, is as follows: The little patient may or may not be anesthetized as the examiner elects. If no anesthetic is administered, two assistants are required to steady the head and the body. The child is placed on the table with a pillow under the head to flex the chin. The operator stands at the left side of the table facing the head. The mouth is opened by pressing the finger-guard between the teeth; Jackson's child (not the slide speculum) laryngoscope is introduced and passed gently down until the epiglottis is seen; then the instrument is pushed behind the epiglottis and the base of the tongue pulled forward. In this procedure little force is used, since the tissues in a child's throat yield easily to slight pressure. With Mosher's instrument there is danger of loosening or breaking the incisor teeth, which is not the case with the smaller speculum. Success depends on careful manipulation of the tube rather than on force. A clear view of the larynx is obtained and delicate operations can be performed through the tube. Those who master this method will be well repaid for the time spent in learning it. Under general anesthesia adults can be examined in the same way. The tube is rather small for large throats, and for adults an oblong instrument will probably give a better view. I claim nothing original for the above method. It is a combination of Mosher's position and Jackson's instrument; it is superior to the extension position with the same speculum or to Mosher's instrument with flexion.

SHALL WE BURY THE STUMP OF THE APPENDIX?

A NEW AND SIMPLE METHOD OF DOING SO *

HARVEY P. JACK, M.D.
CANISTEO, N. Y.

The question of the disposal of the appendix stump is still a mooted one. It has not been universally settled among surgeons whether they prefer to bury the stump of the appendix or to content themselves with simple ligature.

The convincing article of Seligmann, written a few years ago, in favor of simple ligature of the appendix has converted many to this easy method of dealing with it. In the light of recent experience it would seem to be largely a question of whether the case was an infected one; in other words, whether drainage was used or not. In those cases in which it is necessary to use drainage after amputation of the appendix, burial of the stump is not necessary, as, in the event of a fecal fistula, exit is provided; but in the clean cases it seems well established now that the raw surface should be covered in.

Dr. John A. Wyeth a few years ago published a report of a large series of cases in which simple ligature of the appendix stump had been used with excellent results; and he reported several cases of hemorrhage from an unsecured artery at the base of the appendix in which the method of inversion of the appendix was practiced. In this article he advocated simple ligature of the appendix by means of a celluloid thread. This has been the method followed by Dr. Robert T. Morris of New York, who in his experience has seen *no reason to change* it. I have followed this method for the last few years until recently, when I have become convinced that burial of the appendix stump should be *practiced in all clean* cases. While we have had no bad results from simple ligature, in one case the ligature came away, causing a temporary fistula, which, however, healed kindly. That others have not had such uniformly good results from simple ligature is gathered from an article by Murat Willis of Richmond, Va. Willis wrote 105 letters to prominent surgeons in the United States, asking the following questions:

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* Read before the semi-annual meeting of the Steuben County Medical Association, Hornell, N. Y., Oct. 13, 1908.

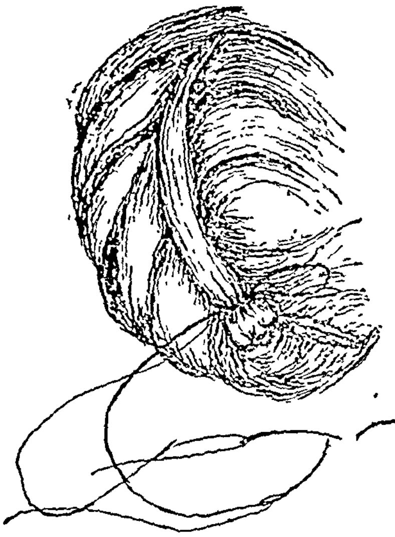

Fig. 1.—Burial of appendix stump. Ligature, 12 inches long, doubled, each end threaded into a fine intestinal needle tied about the base of the appendix, ¼ inch from the cecum, the knot placed on the side opposite to the raw surface left after dissecting away the mesentery of the appendix. (The illustrations are from drawings by Dr. C. C. Rowley.)

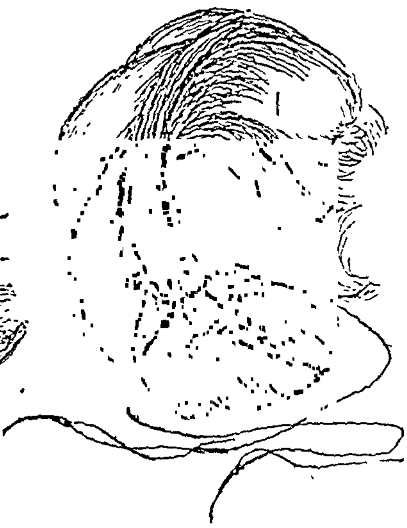

Fig. 2.—Burial of appendix stump. Each needle made to catch the wall of the cecum on one side ½ inch from the base of the appendix, opposite the knot.

1. Do you ligate or crush the stump?
2. Do you divide with knife or cautery?
3. Do you use a chemical disinfectant?
4. Do you bury the stump? (a) If so, how? (b) If not, why not?
5. Have you seen any ill effects arise from unburied stumps? If so, what?
6. Have you observed any harmful effects of any character from burying the stump?

The only questions that concern us are 4, 5 and 6. The answers to the former questions show slight difference in technic of the burying of the stump, dividing by means of the knife and disinfecting by means of carbolic acid. In answer to Question 4 it is found that 77 out of 105 surgeons always bury the stump, 66 by ligating and inverting into the wall of the cecum, 11 by invaginating the unligated stump into the cecum. These are the cases in which hemorrhage has resulted. Eleven usually bury the stump, leave unburied only those in drainage cases, and 11 never bury the stump. To Question 5, 23 of 105 answers mentioned bad results that had followed simple ligation of the stump; among these, 7 cases of intestinal obstruction from adhesion of the bowels to the stump, 2 of which were fatal; many temporary fecal fistulas; 5 cases of fatal peritonitis; many cases of postoperative adhesions; 3 cases of slipped ligature (all of which were fatal); 5 cases of secondary abscesses; 1 case of slow recovery, in which a stitch gave away during first bowel movement and a large swelling developed. This, however, was absorbed and the patient recovered.

The answers to these questions are from such men as Armstrong of Montreal, Bevan of Chicago, Blake, Bryant and Gerster of New York, Kelly of Baltimore, Matas of New Orleans, Monks and Munro of Boston, Senn of Chicago, Rixford of San Francisco, Vander Veer of Albany, and Willard of Philadelphia.

Two interesting cases, one of blown-off ligature with the result of the escape of fecal contents and death, and one of postoperative adhesion with bowel obstruction are reported by Willis himself. His first case was a perfectly clean one in which a sound appendix was removed, the stump being simply ligated. Two days after the operation the woman developed postoperative distention of the bowels. The ligature was blown off, the fecal contents escaped and the death of the patient followed. In this case a simple myomectomy was done and the appendix was removed at the same sitting. From these cases the conclusion seems established that we should always bury the appendix stump in sound or interval cases, in any cases in which drainage is not used.

There have been originated a great many methods of burying the stump of the appendix. The one most generally used is the purse-string suture. There are several objections to this method, the chief of which is the difficulty sometimes present in applying it to fat subjects or to those in whom the cecum is not very movable. When the purse-string suture method is used the appendix should always be firmly ligated first. Another objection to this method is that a considerable area of cecal wall is enfolded. When postoperative distention occurs considerable tension is placed on the purse-string suture for this reason. Another objection is that it takes an unnecessary amount of time and more needle punctures are required. The results of this method, however, have been excellent.

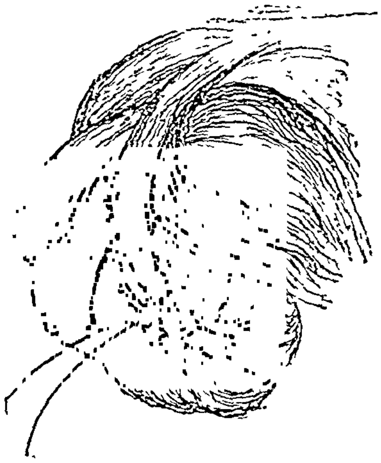

Fig. 3.—Burial of appendix stump. Suture tied.

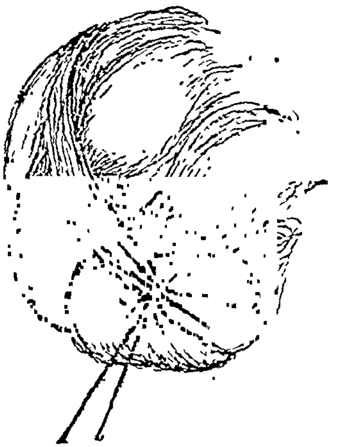

Fig. 4.—Burial of appendix stump. Final mattress suture.

The method I here propose to explain is much simpler and the performance of it attains exactly the same ends as those of the purse-string and ligation method. The method consists of this: First, a good strong intestinal silk or fine celluloid yarn is selected. A ligature is cut off about twelve inches in length and each end of this ligature is threaded into a fine intestinal needle. The needles are handed to an assistant, who is directed to hold one in each hand. Sufficient length of the doubled portion of the ligature is used by the operator to tie a firm knot about the base of the appendix one-fourth inch from the cecum, the knot being placed on the side opposite to the raw surface left after dissecting away the mesentery of the appendix. Now one needle grasped in a pair of forceps is made to catch the wall of the cecum on one side one-fourth inch from the base of the appendix, opposite the knot tied around its base and piercing the intestine to the depth of its fibrous coat. The same procedure is gone through with on the opposite side of the appendix with the other needle. This suture is now tied. When the stump of the appendix becomes buried, neatly and completely, in the wall of the cecum usually no further suture is necessary; but should there be a slight puckering of the wall of the appendix which does not completely cover the stump, one needle is made to puncture both sides of the cecal wall which projects above the stump and is then tied to the suture on the opposite side, thereby forming a single mattress suture in addition to the one first described. This will always result in a complete burial of the appendix stump. The ligature attached to the mesentery of the appendix has been left long in the beginning; one strand of this is now tied to the silk used in burying the stump, thereby bringing the mesentery as a cap over the buried stump. This, it will be seen, results in a complete covering in of all raw surfaces. I have used this method in the last few cases in which I have operated, with great satisfaction. It seems to me that there is less postoperative pain for the reason that only enough intestinal wall is used to accomplish the desired result. The simplicity of the method shortens the time of the operation, which is another reason for its use. The accompanying drawings show the method of application for this method.

39 Greenwood Street.

CLINICAL OBSERVATIONS ON PULMONARY HEMORRHAGE

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The sight of blood is at all times disquieting to the layman, and is particularly alarming in the case of pulmonary hemorrhage. Even the attending physician shares in the perturbation produced by a copious hemorrhage, knowing his comparative impotence in coping with the condition. It is generally conceded that there is no direct hemostatic for blood coming from the lungs because of the inaccessibility of the bleeding point. The medicinal agencies usually resorted to are such, as is believed, bring about a formation of blood-clot in a more or less indirect way. Some of these agents are directed to the heart, reducing its force, as aconite; some to the arteries, diminishing their pressure, as the nitrites; others, again, to the lungs, limiting their activity, as opium. Some are assumed to act on the blood itself, increasing its coagulability, as the calcium salts; others by reducing its bulk, as saline cathartics.

What procedures shall we employ in our attempts to control pulmonary hemorrhage, and what shall be our guide in their selection?

Theoretically, the condition of the heart, the lungs, the vessels and of the blood itself, should be our indicator. Practically, however, those who have much to do with this condition realize how uncertain is the clinical application of this guide in the great majority of cases. From a somewhat extensive experience in the handling of varying grades of pulmonary hemorrhage at the Bedford Sanatorium of the Montefiore Home (early cases) and the Sanatorium of the Jewish Consumptives' Relief Society at Edgewater, Colo. (advanced cases), I have formed the following conclusion:

Hemorrhage from the lungs is a common outward expression of an abnormal state of the respiratory organs, and, like any other symptom, requires for its rational treatment an understanding of the causative factors. I would, therefore, divide pulmonary hemorrhage into three types, according to the pathologic condition:

Type 1: Hemorrhage resulting from a hyperemic condition of the bronchial mucous membrane or lung tissue, associated with a relaxed or eroded area of mucous membrane (capillary hemorrhage).

Type 2: Hemorrhage resulting from the destruction of lung tissue, associated with an eroded small or medium-sized blood vessel or vessels (arterial or venous hemorrhage).

Type 3: Hemorrhage resulting from the rupture of a large blood vessel.

By far the vast majority of cases belongs to Type 1. Clinically, we may assume that such hemorrhages are brought about by any one or more of the following exciting causes: sudden chilling of the body; here the blood finds its way out by rhexis or diapedesis through a vulnerable area—I have seen many examples of the influence of this agent in patients who have been successfully tided over a period of bleeding in the warm wards only to have a prompt recurrence on their being removed to the exposed tents; by a pneumonia or pleurisy; by overexertion or excesses of various kinds; by exposure to wind; by hill climbing; by high altitude; by co-existing cardiac disease; by disturbances of the portal circulation; by over-distention of the stomach and by vomiting; by alcoholism; by vasomotor influence and menstrual disturbances, and by many other factors of varying degrees of frequency and importance which may tend to increase the pressure of the blood. The peculiar idiosyncrasy on the part of some individuals to bleed easily is also to be taken into account.

The question arises: How are we to discover the pathologic state in a given case, especially when we had not previously examined the patient and have no definite knowledge of his history? Here the following data may be of service: The immediate precursory signs of the bleeding and the character of the blood that is discharged. It is of value to know whether the hemorrhage was preceded by a tightness or feeling of oppression in the chest; whether the hemorrhage was intermittent and moderate or sudden and copious. It is to be assumed that in the first two instances the hemorrhage is due to congestion in the diseased area, and that in the latter it is caused by the rupture of a vessel. Regarding the information derivable from the blood itself, we are justified in believing that in the hemorrhage due to congestion the blood is red, has little or no air bubbles and little or no sputum, while in rupture the blood is mostly of a darker color, has numerous small or big air bubbles and is mostly mixed with purulent sputum. In the congestive variety, the blood is thin, in rupture it is more consistent. In congestion the blood is always coughed up, while in rupture it is either spurted up without effort or comes in a gush. In vasomotor or hysterical bleeding the blood is pink or rose-colored. The periodicity of the hemorrhage may be of value in establishing an etiologic influence; true vicarious hemorrhage is very rare, but there are innumerable instances of blood spitting in tuberculous women, usually moderate in amount, but at times rather severe, which occurs only at the time and coincident with menstruation; these instances perhaps may be ascribed to the vasomotor excitability which is so usual an accompaniment of this function.

I believe that the management of pulmonary hemorrhage would be much more fruitful of results if our treatment were based, so far as possible, on the underlying pathologic condition.

Every patient with bleeding from the lungs should, first of all, be put to bed, in a semirecumbent position. This position favors the easy and rapid expectoration of retained blood and sputum, and thereby greatly lessens the danger of an aspiration pneumonia or a dissemination of the disease, both of them being too frequent sequelæ of this condition. The patient himself and those about him should be reassured by the calm and resolute demeanor of the medical attendant; the impression must be subtly conveyed that the case may, indeed, be serious, but nothing uncommon or necessarily menacing is transpiring. The room should neither be too warm nor glaringly sunny, as both these conditions produce mental and physical unrest; the bed covers should be warm, but not too heavy. Occasionally in case the patient is very excitable it may be a necessary preliminary to give a small hypodermic dose of morphin, say ⅛ grain, but if possible this medication should be avoided. The patient should not be permitted to converse unnecessarily, nor should he be much spoken to. Solicitous and sympathetic friends and relatives should be barred from the room, and the sick one placed in charge of a competent nurse or a level-headed member of the household, who will not disturb him by undue zeal. The food should be given in small quantities and should be of a highly nutritious quality; it should be semisolid and not more than lukewarm; necessarily it should be as easily digestible as is possible. The quantity of fluid given should be limited. The bowels and kidneys should receive prompt and proper attention. The administration of cracked ice—a very popular procedure—is of doubtful value, and its immoderate employment is to be condemned; it is apt to produce vomiting, which tends to a recurrence of the hemorrhage. It also increases the volume of blood and thus heightens the tension which again is prone to bring about a relapse.

In the class of cases supposed to be due to congestion, agents that will bring about a reduction in the blood pressure are indicated and often are of signal service; among these the nitrites, especially amyl nitrite, take the front rank.[1] When the latter drug produces headache or palpitation, potassium nitrite may be given hypodermically, usually in grain doses; the sodium salt is also greatly extolled, but the potassium salt has a more enduring effect. The bleeding once under control, resort should be had to nitroglycerin, say 1/50 grain, every three or four hours. By employing this drug according to the degree of high or low pressure (determined, if possible, by systematic use of a blood-pressure apparatus) recurrence frequently may be avoided. In case of a very troublesome cough. a small dose of morphin may be given at bedtime and will ensure a good night's rest. As the danger of pulmonary hemorrhage is not the loss of blood, which is generally made good rapidly, but the after-effects in the shape of pneumonia or spread of the disease process, I am in the habit of giving ammonium muriate combined with codein, both in small doses. The ammonium salt favors the expulsion of retained secretion, and the codein is given in small quantity so as not to interfere with this action while at the same time inhibiting too excessive coughing. As an additional eliminant, I also administer magnesium sulphate, one dram three times daily; this reduces congestion and removes excrementitious matters which when retained stimulate the vasomotor center and raise the blood pressure. Above all, care should be taken not to over-medicate, for the digestion may be upset, vomiting ensue and nutrition be lowered. While the keynote of treatment should be to avoid stimulation, caution should be observed not to go to the other extreme and still further depress the patient.

In the second type of cases, when the hemorrhage is due to rupture of a small vessel, the aim primarily should be to reduce the force of the heart and to lessen the flow of blood through the lungs. In my experience aconite is the best agent for this purpose. In addition I use the calcium salts, preferably calcium lactate, to increase the coagulability of the blood. It may be well to warn against the generally prevailing opinion that this drug may be safely given in unlimited doses: this is an error, as it is often known to disturb the stomach. Occasionally the subcutaneous or rectal injection of sterile gelatin solution is of great service in bringing about this result. Ligation of the thighs or arms or both will greatly diminish the amount of blood circulating in the lesser system; here again I find magnesium sulphate useful in aiding this effect. Vasodilators should not be given in this type of bleeding, as they stimulate the circulation. Styptics in general are of very little if of any value.

Ergot, a drug much used in routine practice for pulmonary hemorrhage, in my opinion, is not only useless, but may even produce an effect opposite to the one intended. In the case of a ruptured vessel which usually is atheromatous, its effects are *nil*. The only result is a general contraction of the muscular coats of the sound vessels, with an accompanying increase of tension of the blood and consequently a greater flow through the ruptured point.

Unfortunately in the class of cases embraced under Type 3, in which the hemorrhage is from a rupture in a large vessel, the patients respond very poorly to the efforts of the physician. When the loss of blood has not been sufficient to produce a fatal end, the most we can do is to tide the patient over the period of collapse and afterward combat the profound anemia by suitable measures, even to the extent of employing transfusion of physiologic salt solution. Ligation of the extremities may occasionally be of service.

So-called vicarious hemorrhage, or hemorrhage coincident with the catamenial period, if moderate in character, requires no special treatment. In this condition, ergot and hydrastis are recommended by some practitioners. It would be a wise step to put such patients to bed a day or two before the expected menstrual period and to shield them from disturbing or exciting influence of any kind.

Slight hemorrhage occurring in hysterical individuals should not be treated too seriously, nor should it, on the other hand, be given too little heed; for it must be kept in mind that the co-existence of hysteria with tuberculosis of the lungs occurs frequently enough and that we have to deal with a very disturbing element in a disease sufficiently serious without it. When it is possible to demonstrate that blood-spitting is produced by sucking or pricking the gums, wounding the nasal or buccal mucous membrane, the approved medicinal and psychic resources may be confidently turned to account. When this evidence is lacking, however, a hysterical individual suffering from hemoptysis should be treated for the blood-spitting, with little regard for the nervous condition which may be an accidental, not a causative, complication.

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[1] Instead of amyl nitrite, of late I have been using chloroform by inhalation, with excellent results. The number of cases, however, in which this agent has been applied is not sufficient to form a scientific conclusion. A more detailed report on the use of chloroform in pulmonary hemorrhage will appear later.

Finally, it is of some importance to be alive to the occasional occurrence of malingering. There is always a certain number of people who manage adroitly to deceive one into the belief that they are spitting blood, their object being to obtain sick benefit, to escape work or to enter a comfortable institution. It is often difficult to trap these people and to expose the spurious nature of the complaint, but one who is on his guard and who has much to do with genuine cases of pulmonary hemorrhage will usually be able to classify them in their proper category.

I have not gone into the matter of conditions other than pulmonary tuberculosis which may have hemorrhage as a prominent symptom. In most instances, a hemorrhage from the lungs means phthisis of that organ, but we can not forget the by no means rare cases of blood-spitting in bronchiectasis and in mitral stenosis.

A SHAWL PIN IN THE MALE URETHRA

B. CLARK HYDE, M.D.

KANSAS CITY, MO.

Patient.—E. P., white, aged 13, a schoolboy, was admitted to Kansas City Post-Graduate Hospital, Nov. 23, 1908.

Previous History.—The patient stated that on the night of Nov. 19, 1908, in attempting to remove an accumulation of dirt or foreign matter from the glans penis, he had passed a shawlpin head first into the urethra, and it had slipped away from his grasp and become fastened in the urethra. He denied sexual perversion.

Present Condition.—The boy is well nourished and well-developed. Intellectually, he seems below normal and has a peculiar defect in speech, something between a lisp and a stammer. He complains of nothing referable to bladder or otherwise, and passes urine without difficulty. He was brought to the hospital by his father because the boy had told him of losing the pin in his urethra, not because of any particular discomfort caused by the foreign body.

Examination.—The prepuce could be easily retracted from glans; the penis was well developed. At the penoscrotal angle, deep in the tissues, could be felt a round mobile mass about the size of a pea. Nothing like the shaft of a pin could be outlined or palpated. There was no particular pain on palpation of the foreign body, which was considered to be in all probability the head of the pin.

Roentgen Examination: An *x*-ray photograph was taken by Dr. E. H. Skinner, the hospital roentgenologist. It showed the pin lodged in the membranous urethra, with an apparent shortening of the pin to about one-half its size, its actual length being six centimeters. The picture seemed to confirm the opinion that the small mass felt at the floor of the urethra was the pin's head.

Operation.—Nov. 24, 1908, after the usual surgical preparation, an incision was made at the penoscrotal angle along the urethra, over the small round mass. It had been anticipated that when the incision reached the urethra, the head of the pin could be grasped and withdrawn; however, on approaching the urethra it was discovered that it was the point of the pin which had been nearest the surface, and that the rounded feeling imparted to the touch had been caused by the stretching of the tissues over, and, as it were, "padding" the point. The head of the pin rested in the bladder, into which viscus the entire pin had been denied ingress only because of the length and lack of flexibility of its shaft. The point of the pin was grasped by forceps and drawn through the, as yet unopened, floor of the urethra into the wound. Its entire removal was prevented by the pin head coming in contact with the urethral floor. Instead of enlarging the opening in the urethra to a sufficient size to permit the delivery of the head, the following procedure was adopted: the head of the pin was turned toward the external meatus and passed along the urethra until it could be grasped by a forceps introduced through the meatus, by which route the *corpus delicti* was easily extracted. This left only a very small puncture in the floor of the urethra, merely large enough to admit the diameter of the shaft. The wound was closed by three deeply placed silkworm-gut sutures.

Subsequent History.—The patient suffered from nausea for four hours. He was catheterized seven hours after the operation, four ounces of urine being obtained; afterward he voided urine naturally. He passed a good night and was put on general diet the next day. There was never any leakage of urine through the operative wound, which healed perfectly. The stitches were removed on the seventh day following operation, on which day the boy left the hospital. He has remained in good health since.

CYSTS WITHIN THE SPINAL CANAL

M. A. BLISS, M.D.

ST. LOUIS

Krauss[1] reviews eleven cases of cyst of the spinal canal. Of these only one, that of Spiller[2] appears to be identical with the one herewith reported. Spiller[3] says: "A collection of clear fluid in a cyst of the spinal pia arachnoid is a condition little known in America, as only one case occurring in this country is on record (Spiller, Musser and Martin), and only a few are found in the German literature. So far the French and English journals contain no examples."

History.—Miss M., a patient of Dr. Willis Hall of this city, aged about 50, was well and always very active up to August, 1905. In jumping from a rapidly moving buggy she fell heavily on the left buttock. The left ankle was broken. The hip continued to hurt after the ankle healed, and since the accident she has suffered from a "shifting neuralgia." She felt after the accident that "her spine was all jolted up." The gait was at times disturbed by the pain in the left hip. In 1906 (date can not be fixed) the patient suffered severely from pain across the chest at the upper level of the breasts. This increased through 1907. In March, 1907, she had a hard fall in a railway coach, which made her sore all over but produced no local pain. In April, 1908, the patient was in St. Luke's Hospital three weeks on account of pain across the front of the chest. In El Paso, Texas, she had "grip" (?) in August, 1908; she had no cough, no cold in her head, but ached all over, most intolerably in her hips and back. About the same time severe cramping occurred in her legs. When out riding she would frequently have to stand up in the carriage on account of the cramping. By the last of August she became extremely awkward in her gait.

Dr. Fry, who saw the patient September 5, noticed that incoordination of gait and station was the most conspicuous symptom of the case at that time. He noted also loss of pain and temperature sense with fair preservation of tactile sense in her legs.

About October 1 she became entirely paraplegic. The muscular contractures and startings were more severe. If the legs were passively placed in extension, violent involuntary flexion occurred. The bladder and rectum ceased to act. When the patient was brought to the hospital the bladder was greatly distended. The catheter brought away 74 ounces of urine.

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[1] In Brain, 1, 1907, Part CXX, 533.
[2] Univ. Penn. Bull., March and April, 1903.
[3] Am. Jour. Med. Sc., January, 1909, p. 95.

Examination.—Nov. 9, 1908, she lay on her side with knees drawn up, unable to move any muscle groups in the lower extremities, except the adductors of the thighs. The legs and feet were entirely paralyzed. Muscular cramps were frequent and severe and awoke her from sleep. Contractions became more severe if the legs were passively extended. The bladder and rectum were functionless. Ankle-jerks and knee-jerks were much increased; ankle clonus sides and reversed plantar reflex were present on both sides. No abdominal reflexes could be elicited. Pain sense was very much obtunded in the feet and legs; less so in the thighs and trunk except on a level with the upper half of the mid-piece of the sternum, where the severest pain had always been. A space an inch wide vertically and about three inches wide horizontally was without pain response, but tactile and temperature impressions were recognized. Analgesia shaded off into hypalgesia. Elsewhere below this point tactile and temperature sense were obtunded to about the same extent as pain sense. The upper limit of the hypalgesia was at a line drawn horizontally through the junction of the first with the second piece of the sternum. There was no zone of hyperasthesia above this line. Arms and armpits, neck and head were normal. There were no cranial nerve symptoms.

Operation.—By Dr. Harvey Mudd, Nov. 30, 1908, 9 a. m. The spines and part of the laminæ of the seventh cervical, the first and second dorsal vertebræ, were removed. The dura bulged irregularly at the upper and lower ends of the part exposed, seeming to indicate a constriction between. The dura was a darker white at the bulging points. The dura was slit centrally from below upward. A sharp spurt of clear fluid, which could not be distinguished from the cerebrospinal fluid, occurred. It seemed that the lower end of a sack had been opened, for the upper end ballooned up with cerebrospinal fluid, as it surged upward in response to the cardiac movements. When the dura was grasped by forceps and gently lifted, small bands of tissue were seen stretching between the dura and the pia. Very slight force with a dural probe sufficed to break these up, after which the ballooning process ceased. There was proliferation and engorgement of the vessels of the pia. The dura was stitched. The wound was closed with a small catgut drain. Surgical recovery was prompt and uninterrupted.

Postoperative History.—December 2 there was movement of left ankle, and fairly good excursion. Reaction to pain and tactile impressions in both legs were much improved. The patient could not be thoroughly examined on account of her objection to it.

December 4: There was improved sensation in all forms. The patient moved the left toes, ankles, leg and thigh; she moved the toes of the right foot feebly. The adductors of both thighs moved. There was a sense of desire to urinate.

December 7: There was no increase of motor power but the patient recognized and localized all forms of sensory stimuli in both legs. There was some pain in the area at the sternum, but better pain sense.

December 11: There was gain in power of all muscle groups of the left leg. The patient could raise her heel off the bed when the toes were resting on the bed. There was no movement of the toes of the right foot but good excursion at ankle; the adductors and abductors of the thigh were improved. Pain and tactile sense responses were prompt and accurate over the entire surface of both legs. There was marked desire to pass water an hour before catheter time.

December 18: The patient passed a small quantity of urine voluntarily. The left leg and foot, including the toes, moved freely. The ankle clonus persisted. The patient had some cramping but very much less severe. The right leg was much improved in all movements, including the toes. The abdominal muscles were active.

December 19: The patient voided eight ounces of urine voluntarily and thereafter emptied the bladder successfully and bowel movements became normal.

December 30: The patient moved all muscle groups in both legs. The ankle clonus, on both sides and all deep reflexes were present. The patient kept her legs flexed but could extend them voluntarily.

January 1, 1909: The patient swung the legs out of bed and sat up on the edge of the bed unaided. The right leg was as good as the left in motor power. The ankle clonus and plus knee-jerks persisted. The feet felt "sleepy," but pain, tactile and temperature tests brought prompt and correct responses.

January 14: The patient could support her weight by placing her hand on a chair to steady herself. There was some contracturing at the knees and full extension brought discomfort, but she could extend the legs voluntarily. The "startings" had ceased. Her general health was perfect.

PROBABLE INSOLATION FOLLOWING ABDOMINAL SECTION IN AN INSANE WOMAN

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LOS ANGELES, CAL.

Patient.—Woman, aged 50, brunette, of medium height, weight 150 pounds, the mother of one child. This child died at the age of nine and the patient continually mourned its loss.

History.—I was this patient's medical adviser for fifteen years. While she was never very strong, she had fairly good health, until about four years ago, at which time she learned that she had a fibroid tumor of the uterus and was advised to have it removed. She refused operation, and since then had suffered with a variety of obscure symptoms, seemingly neurasthenic in character. She has always lived a sedentary life of luxury at hotels, both at home and abroad. She rode around the country a great deal in a motor car. I first treated her about fifteen years ago for constipation, and at intervals during eleven years I treated her for attacks of suppression of urine and attacks of vertigo. In April, 1898, I removed a benign polyp of the cervix. She first consulted me six years later about having attacks of vertigo, and I sent her to Dr. H. Bert Ellis, who fitted her with lenses for a slight error of refraction and a little astigmatism. The ophthalmoscope revealed normal and healthy fundi. With the glasses the attacks of vertigo were less pronounced, but she stated that when walking outdoors the sidewalk appeared to rise up in front of her. At this time she was under the care of Dr. R. Wernigk, who reported no evidence of kidney disease. He called in consultation Dr. Elbert Wing, who thought the case one of either hysteria or neurasthenia. There was then no evidence of gross brain disease.

Present Illness.—On June 15, 1908, about ten days after Dr. Wing saw her, I was called. Her husband stated that she had gone insane, and was destroying all her letters, etc. She had turned all her jewelry over to him, remarking that she would not need it again. I advised that she be put to bed in the care of a trained nurse and closely watched day and night. In the morning the night nurse informed me that the patient had had a restless night and had slept very little. She took nourishment under protest; in fact she protested not by word but by action against everything that she was asked to do. I diagnosed the case as one of melancholia. On the following day I made a thorough examination and found the uterus about four times its normal size with a fibroid projecting from the right side of the fundus. Her husband stated that a Buffalo physician had diagnosed fibroid three years ago and advised its removal, and that Dr. Wernigk had recently done the same thing. The growth of the tumor had been slow and had not interfered with menstruation.

Course of the Disease.—The patient slept very little for the first week. After the first week one gram of chloral was given about 8:30 p. m. and in five minutes she would fall into a sound sleep and generally would have a good night, sleeping from six to eight hours. Without the chloral she would not sleep. Only on a few occasions were we obliged to administer bromids to keep her quiet during the day. On one occasion, during her husband's absence, she became unmanageable, both nurses being unable to control her. After this she was very restless and disturbed for a couple of days. When first taken ill she appeared to be well nourished but was anemic. This condition was caused principally by self-dosing for many months previous. Every night before retiring she would take a strong laxative pill of some sort or other and follow this in the morning with from 4 to 8 grams of Carlsbad salts, insisting that she was bilious.

Blood: Examination of the blood showed, white cells 7.000, red 1,000,000; hemoglobin, 60 per cent. She was given a tonic and hematopoietic, and encouraged to take a good supply of nourishing diet. At the end of two months the blood examination showed, white cells 1,625, red 1,000,000, and hemoglobin, 85 per cent.

Urine: She secreted a normal quantity of urine and frequent examination always showed it normal.

Mental Condition: Her mental condition continued to grow worse; she would not speak to any one, including her husband, and frequently refused to take nourishment.

Treatment.—From the first I advised her removal from the hotel to the country but could not prevail on her husband to do so. I then advised removal of the tumor. Dr. H. G. Brainerd and Dr. M. B. Campbell were called in consultation and concurred in the diagnosis of melancholia. The question foremost was whether the removal of the tumor would have a tendency to aid recovery. Dr. Brainerd argued against operation; Dr. Campbell advised it. The question of operation was then left entirely with her husband, who, about two weeks later, requested that the operation be performed. She was removed to the Pacific Hospital, and apparently did not realize the change of surroundings.

Operation.—She made very little resistance to being prepared for operation. On September 2, at 9 a. m., I performed a total hysterectomy. Pulse was 90, temperature 99 F. One hour before operation a hypodermatic injection consisting of morphin 0.016 gm. and strychnin 0.0016 gm. was given by advice of the anesthetist, Dr. F. D. Bullard. The patient took the anesthetic, ether, very quietly and safely throughout the operation. On opening the abdomen, the uterus and fibroid tumor presented. There was also a large cystic tumor on the left side (the size of a child's head), which proved to be a tubo-ovarian cyst, intraligamentous, covered by intestines and adherent by fibrous cords and bands over its entire surface, requiring many ligatures and much time in enucleating it. On the right side I encountered the same difficulty but the cyst was only about the size of an orange. The left cyst contained 600 c.c. of brown colored fluid and a concretion the size of an English walnut, the right cyst contained 100 c.c. clear fluid. I removed the entire mass without the use of clamps by double ligating the arteries and adhesions and dividing between ligatures thus obviated the bruising of tissue and preventing any loss of blood. The entire operation was done without any mishap except that the walls of the small cyst, which were very friable, were ruptured in extracting it. As it contained a clear fluid no damage was done. The abdominal cavity was washed out with sterile normal saline solution, and about 500 c.c. at 100 F. were gently poured in before sewing up the peritoneum. Time under the anesthetic was 2 hours 15 minutes. The patient showed some signs of exhaustion but stood the operation well and left the table apparently in good condition. Pulse was 110, of good volume and regular. The last half hour of the operation the patient took very little anesthetic. The entire amount of ether consumed was only 600 c.c.

Postoperative History.—The day was one of the hottest of the season. The temperature of the operating room was from 90 to 95 F. As the patient was perspiring freely she was placed in a comfortable bed previously warmed with hot water bottles. The day nurse who had cared for the patient for the past three months was placed in charge. Between 3 and 4 p. m. I was astonished to learn that the hot water bottles had been renewed because the patient had ceased to perspire. On touching the patient I was shocked to find the skin so extremely warm. The nurse had not noticed any change for the worse. The hot water bottles were hastily removed and the temperature taken by rectum. The thermometer registered 108 F.; the pulse was 160, full and strong; respiration was 26 and the skin was dry and hot. In the axilla the temperature was 107.2 F. The pupils were dilated, the conjunctiva not reacting to touch. An ice cap was immediately placed on the head and the patient was sponged off with alcohol. She was catheterized and 120 c.c. urine drawn. One hour later the temperature was 106.8 in the rectum; respiration was 30, not full; pulse was 140, full and strong; the pupils were dilated. At 7 p. m. temperature was 106, skin moist, pulse 120 and full, regular and strong; respiration was 30; pupils were dilated, conjunctival reflex did not respond to touch. Up to this time the patient had apparently not reacted from the anesthesia. At 10 p. m. temperature was 105, skin dry, pulse 120, full, regular and strong; respiration 35; pupils less dilated, no reflexes. The catheter was again used and 150 c.c. urine drawn. The symptoms gradually improved during the night. At 7 a. m. patient was again catheterized and 180 c.c. urine drawn. She then commenced to show signs of restlessness, moved her arms and legs, and occasionally rolled her head from side to side. The conjunctiva showed return of reflexes; the skin was dry; temperature was 103.4 by rectum; pulse was 120, full, regular and strong; respiration was 36 and shallow. At 10 a. m. the condition was about the same except that the restlessness was increased. At 12:30 p. m. the pulse was 125, irregular but full and strong; temperature was 103; skin was dry; respiration was 40, very shallow and irregular. The patient became less restless, and had involuntary bowel movements.

Termination of Case.—Suddenly there was a change in the patient's appearance, the lips became livid, and the cutaneous circulation sluggish. There were some slight internal convulsive movements of the chest, the eyes oscillated, the pulse became more irregular but remained full almost to the last, when at 1:40 p. m. life became extinct, twenty-seven hours after operation.

I am at a loss how to determine the immediate cause of death. On the death certificate I inscribed as immediate cause of death basilar meningitis. From the symptoms presented I could not lay the cause of death directly to the operation.

The question foremost in my mind, was the prolonged anesthesia in a patient having some brain lesion the cause of a meningitis? Or was this a case of insolation induced by the prolonged use of the hot-water bottles on this fervid day? Also the patient was more or less fatigued from the prolonged operation, and the system was, therefore, less able to resist the excessive heat, due, in the first place, to the high atmospheric temperature of the weather, and, in the second, to aggravation of this by the uncalled-for prolonged use of the applied artificial heat (temperature unknown).

Bonniman[1] says: "By far the greater number of cases of thermic fever that occur yearly in India are in persons who have not been exposed to the sun. . . . Patients in hospitals who have been confined to bed are frequently the subjects of attack."[2]

A SIMPLE CANULA FOR THE DIRECT TRANSFUSION OF BLOOD

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In the operation of direct transfusion of blood by the method of Crile, certain difficulties have sometimes been encountered, and efforts have been made by a number of operators to simplify the procedure. Some experience is required before the Crile instrument can be handled with ease; the caliber of the cuffed vessel is decreased by the canula; sometimes there is difficulty in telescoping the artery over the vein. The steps of the operation with Crile's canula are numerous, and the application of guide sutures and the tying of ligatures complicates the operation, as the following enumeration of the steps of the operation will show. The technic of direct transfusion by Crile's canula comprises the following:

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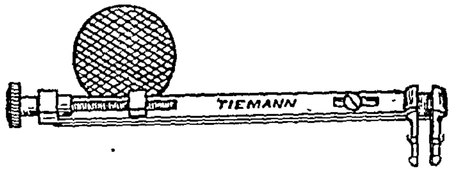
[1] Edinburgh Med. Jour., Vol. XIV, p. 1029, 1864.

[2] I also refer the reader to article on Thermic Fever in Pepper's System of Medicine, 1st edition.

1. The choice of the canula of the proper size.
2. The exposure of the vein of the recipient, its isolation and division.
3. The stripping back of the adventitia and the application of fine guide sutures.
4. The threading of the vein through the lumen of the canula.
5. The cuffing of the vein and the ligature of the cuff behind the basal ridge of the canula.
6. The exposure and isolation of the radial artery.
7. The application of a temporary hemostatic clamp.
8. The division of the artery after the application of a peripheral ligature.
9. The application of the guide sutures to the artery, and the telescoping of the artery over the cuffed vein.
10. The application of a ligature to keep the artery in place.
11. The removal of the hemostatic clamp from the artery so that the blood may flow from the artery of the donor to the vein of the recipient.

The following is the description of a canula which I have devised, the use of which will make a number of the manipulations above enumerated unnecessary and will simplify the entire operation.



Simple canula for the direct transfusion of blood.

The canula is built on the principle of a monkey-wrench, and can be enlarged or narrowed to any size desired by means of a screw at its end (see illustration). The smallest lumen obtainable is about equal to that of the smallest Crile canula, and the largest greater than the lumen of any radial artery. The instrument is cone-shaped at its tip, a short distance from which is a ridge with four small pin-points which are directed backward. The lumen of the canula at its base is larger than at the tip. The construction of the canula can be easily understood from the following description of the method of using it.

The radial artery of the donor is exposed and isolated in the usual manner. The canula, screwed wide open, is then slipped under and around the vessel. It is then screwed shut until the two halves of the instrument slightly compress the vessel. The artery is then tied off about one centimeter from the tip of the canula. Before the vessel is divided three small eye tenacula are passed through the wall of the artery at three points of its circumference, a few millimeters from the ligature. Small mosquito forceps may also be used. These are given to an assistant, who makes traction on them while the operator cuts the vessel near the ligature. The moment the artery is cut the stump is pulled back over the canula by means of the tenacula or forceps, and is held in place without ligation by the small pin-points. There is no bleeding from the artery, even though no hemostatic clamp has been applied, because the canula itself acts as a hemostatic clamp. The vein of the recipient is then exposed (but not freed), two ligatures are passed around it; one is tied peripherally in the usual manner. A small transverse slit is made in the vein, the canula with the cuffed artery inserted into the vein, a ligature tied around the vein and canula, the canula screwed open, and the blood allowed to flow. The rapidity of the flow can be varied as desired by the size to which the instrument is screwed or unscrewed, and the lumen of the artery is never diminished.

It will be noticed that the artery is cuffed instead of the vein; this method I believe to be more correct. The vein is the larger vessel and can therefore be more easily telescoped over the artery. The vein is only exposed, not freed, and the artery is intubated into it.

With this canula I have been able to make the anastomosis in less than four minutes after the artery had been isolated, and have found the entire procedure a simple one. The advantages of the instrument are the following:

1. One canula will fit any vessel.
2. The canula is applied around the vessel, instead of the vessel being drawn through the canula.
3. No ligature of the cuffed vessel is required.
4. The canula itself acts as a hemostatic clamp.
5. The cuffing of the artery is easily accomplished without stripping back the adventitia, and therefore the traumatism to the artery wall reduced to a minimum.
6. The vein need only be exposed, not dissected out and cut.
7. As the canula is unscrewed, the blood will flow, the flow can be regulated at will, and the lumen of the artery is not diminished.

Madison Avenue and Sixty-third Street.

APPENDICOSTOMY IN PERNICIOUS ANEMIA*

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Pernicious anemia is a primary anemia, characterized by a progressive diminution in the number and changes in the form of the red blood corpuscles associated with a decrease in the amount of hemoglobin, which is not so marked as the reduction in red blood cells. The disease usually terminates fatally, whatever the method of treatment, but often there are periods of marked improvement, followed by relapse. It is not within the province of this paper to discuss the etiology, pathology or symptoms of this disease; I shall limit myself instead to the treatment in those cases that are supposedly due to anaerobic bacteria in the intestinal tract. Herter, who is the pioneer in this line of work, asserts that anaerobic bacteria in the intestinal tract play a prominent part in the etiology of pernicious anemia. He has shown that oxygen is found only in the small intestine, and that for this reason these bacteria must live and propagate in the large intestine. He has demonstrated that these bacteria form a toxin, and that by injecting this toxin into the lower animals a blood picture similar to that of pernicious anemia is produced. With this theory as a working basis, Hollis and Ditman have used colonic lavage in two cases, with good results. In both cases arsenic was thoroughly tried, without beneficial effect. The colonic lavage caused the indican and the skatol to disappear rapidly from the urine, and the hemoglobin in two months' time rose from 25 to 80 per cent. and the red blood cells from 1,000,000 to 4,000,000. Several months after discharge both patients were well, and with no decrease in blood count.

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* Read before the Southern Surgical and Gynecological Association, St. Louis, Dec. 15-17, 1908.

Houghton[1] reports a case in which the treatment was more radical. The patient was a man, 69 years old, with symptoms and physical signs of pernicious anemia, hemoglobin 45 per cent. Unfortunately, the reds were not taken. A differential showed a relative lymphocytosis with many normoblasts. The urine was albuminous and contained casts, and the skatol and indican reaction was marked. Arsenic and colonic lavage failed to produce any improvement. Houghton performed a cecostomy, and through the fistula the colon was irrigated night and morning with a saline solution. Houghton informs me, in a personal letter, that the patient, who had improved rapidly, died from the kidney complication twenty months after operation. A count made a short time before death showed the blood almost normal in character, with the exception of a slight anemia.

The case that I desire to report occurred in the service of my colleague, Dr. J. A. Witherspoon, and was under the charge of his associate, Dr. W. C. Dixon.

Patient.—A negro man, 45 years old, was admitted to the hospital the first week in April, 1908. He had marked muscular weakness, shortness of breath, and instability of the pulse, also edema of the ankles. He came to the hospital for relief of diarrhea, associated with gastrointestinal symptoms.

Examination and Treatment.—The mucous membranes were quite pale; there were brownish discolorations on the skin of hands and face; exhaustion was extreme, without marked emaciation. An examination of blood on April 10 showed the red blood cells 1,800,000, the white blood cells 3,000, hemoglobin 30 per cent. The patient was given ascending doses of arsenic, reaching as high as thirty drops three times a day of Fowler's solution. Colonic irrigations of salt solutions were also used. On May 5, 1908, the red blood cells were 2,000,000, white blood cells 5,000, and hemoglobin 50 per cent. On May 23, 1908, red blood cells were 1,710,000, white blood cells 3,500, and hemoglobin 50 per cent. The nucleated red cells were in great numbers, both normoblasts and megaloblasts, associated with a marked poikilocytosis. At this time 95 per cent. of the bacteria in the stools were anaerobic, and no intestinal parasites were found. A twenty-four-hour specimen of the urine showed a trace of albumin, no sugar and a few hyaline and granular casts. The ethereal sulphates were present in large quantities in the urine, as well as indican and skatol. A test meal showed complete absence of hydrochloric acid, with the presence of lactic.

Operation.—I suggested to Drs. Witherspoon and Dixon that an appendicostomy be performed, and by this means colonic irrigation be done. As the patient had grown progressively worse under the routine treatment for this disease, and as his condition was extreme, they readily agreed, and with the patient's consent the operation was carried out on May 23. I made a long incision through the right rectus muscle, in order that a good view of the abdomen might be obtained. The tissues showed but little tendency to bleed; the rectus muscle was quite red, while the peritoneum and intra-abdominal contents were unusually pale. The liver was slightly enlarged, and the gall bladder moderately distended without stones. The stomach was markedly contracted, no growth being present. The mesoappendix was ligated and divided; two chromic catgut sutures were placed, one above and one below the appendix, grasping the cecum, peritoneum and fascia. The appendix was then stitched to the lower angle of the skin surface of the wound by one suture, and the incision closed in ordinary way. The free end of the appendix, beyond the skin surface, was wrapped in rubber protective tissue and the wound dressed. At the end of thirty-six hours the tip of the appendix was gangrenous and cut off.

Postoperative History.—A small rubber catheter was passed into the intestine through the appendix and tied in position. Through this catheter a quart of salt solution has been passed into intestine twice daily from time of operation to the date of writing. The fluid is usually passed out of the anus in from one to five minutes from time of introduction into the intestine. The patient was delirious for one week following operation, and developed a multiple neuritis, which I believe was due either to the disease or to the large doses of arsenic prior to the operation procedure. Ten days after the operation improvement was noted in the blood, the red blood cells being 2,600,000, hemoglobin 51 per cent. The patient's convalescence has been slow but encouraging. The wrist-drop and foot-drop are now very slight, the appetite and digestion are good, and the weakness and exhaustion have disappeared. Up to October 10 the stomach contents showed complete absence of hydrochloric acid; on that date, however, an examination showed a trace of hydrochloric acid and the disappearance of the lactic acid. On December 10, 1908, examination showed red blood cells 3,860,000, white blood cells 7,200, and hemoglobin 66 per cent. It is interesting to note that before operation 95 per cent. of the bacteria in the stools were anaerobic, the *Bacillus capsulatus aerogenes* preponderating. Ten days afterward 40 per cent. were anaerobic. Thirty days afterward 20 per cent. were anaerobic, and on October 10 the anaerobic bacteria were present only in normal quantities, and have remained so up to the present time. The large amount of ethereal sulphates, indican and skatol found in the urine before the operation—an amount characteristic of pernicious anemia—are now only in normal quantities. A twenty-four-hour specimen showed no albumin or sugar, a few hyaline casts and urea 1.5 per cent.

I must express my thanks to my colleague, Dr. William Litterer, for the careful examinations of the blood, urine, stools and stomach contents, for without these this paper would be of no scientific value; and to Drs. Witherspoon and Dixon I am especially grateful for the very accurate history of the case. It is too early at the present time—seven months after operation—to claim a cure; yet the great improvement in the blood, the return of strength, the disappearance of the anaerobic bacteria from the stools, combined with the reappearance of hydrochloric acid in the stomach, make a clinical picture which is very suggestive of recovery. It seems to me that we are safe at the present time in drawing the following conclusions in regard to pernicious anemia:

1. In all cases stools should be examined in order to determine the presence of a *Bacillus capsulatus aerogenes* infection.
2. If these bacteria are present in great quantities, then high irrigation, combined with arsenic internally, should be used; and if the patient fails to improve, then, it seems to me, the appendix offers the best route for thorough irrigation.

APPENDICITIS AND ACCIDENT INSURANCE *

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A case of peculiar interest, because of the accident question, is that of Dr. M. G. Dadirrian, New York. He has made claim for insurance money on the basis of an attack of appendicitis caused by the accidental swallowing of a lump of solder.

History.—Early in June, 1908, the patient, aged 69, felt a hard lump in his mouth while eating his dinner. The lump was involuntarily swallowed while he was trying to catch it between his teeth. A few days later he developed acute appendicitis. The integrity of the appendix had never been questioned previously. When I saw the patient in consultation with Dr. Charles Hendee Smith and Dr. Thomas H. Cherry,

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[1] Houghton, Harris A.: Apparent Recovery from Progressive Pernicious Anemia Following Cecostomy and Colonic Lavage, The Journal A. M. A., June 29, 1907, xlviii, 2186.

* A case reported at the meeting of the New York Society of Medical Jurisprudence, Feb 8, 1909.

June 17, a rapidly spreading general peritonitis was well under way.

Operation.—An operation for removal of the appendix was performed as quickly as we could get the room ready. Purulent fluid, past the protective staphylococcus stage, was free in the peritoneal cavity, and there was a walled abscess area about the cecum. The adherent appendix was perforated at a point of round gangrene, and in the perforation lay a lump of solder, about the size of a grain of popcorn. The solder was of conventional drop form, with one end as sharp as the point of a pin, and the other end blunt. The sharp point was emerging at the perforation, and was clearly enough the direct cause of the attack of appendicitis. The appendix was removed quickly, through a McBurney incision, and a wick drain left in the short unsutured wound. No effort was made to remove pus from the peritoneal cavity except by offering a line of least resistance by means of the small capillary drain.

Result.—The patient made the customary recovery after this sort of operation, so far as infection was concerned, but there was tardy repair of the wound surfaces, which was probably to be accounted for by the age of the patient, and perhaps by the influence of a mild diabetes mellitus, of several years' duration. The diabetes had been under control, and the proportion of sugar was reported to be from 1 to 2 per cent.

In this case we have a question bearing on the matter of accident insurance, which may call for new adjudication of the word "accident." Perforation of the appendix by the lump of solder accidentally swallowed was not materially different from a perforation that might have occurred from the accidental discharge of a pistol carrying the solder as a missile. The ultimate result, from cause to effect, would seem to be one of relative time only.

616 Madison Avenue.

TREATMENT OF EPISTAXIS

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By far the greatest number of cases of nose-bleed have their origin in the anterior cartilaginous portion of the septum, in the so-called locus Kiesselbachii. Small hemorrhages are easily controlled by the repeated application of a small pledget of cotton moistened with a mild astringent solution to the bleeding point. In the last few years adrenalin solution—1 to 1,000—has been used for this purpose, also a 2 to 4 per cent. solution of cocain hydrochlorate. The cocain solution is efficient in many cases, but has a number of disadvantages. Heydenreich[1] recommends the application of sodium perborate to arrest hemorrhage after operations in the nasal cavity.

In some cases of severe bleeding it is difficult to locate the bleeding point exactly. In such cases, by means of an ordinary powder insufflator, I inject the sodium perborate powder directly into the nasal cavity. Immediately after the insufflation a grayish-white foam issues from the nose, due to the oxygen produced. This oxygen in its nascent state covers and exerts a certain pressure against the bleeding point and the hemorrhage is arrested.

In a case of serious hemorrhage from the nasal cavity in a woman of 48, with sclerotic arteries and in the menopause, I resorted to the tampon, which I applied in the following way: A strip of aseptic gauze one-half inch wide was moistened with a 2 per cent. solution of boric acid and this strip I covered with powdered perborate of soda and introduced into the nasal cavity. I packed it lightly, into the anterior nares in an upward direction. The hemorrhage ceased immediately; the tampon was removed the next day. Before removing such a tampon it is advisable to moisten it with a mild antiseptic solution by means of an atomizer.

224 West Twenty-fourth Street.

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[1] Deutsche med. Wchnschr., 1908, No. 3, p. 114.

Therapeutics

OPTIMISM AND PESSIMISM

Nothing hinders the advance of scientific therapy more than these two attitudes on the part of physicians toward the treatment of disease. On the one hand stand numbers of practitioners who hasten into print lauding the satisfactory results of first one treatment and then another, generally medicinal, of first one and then another disease. These same optimistic physicians will many times be found the following year lauding an entirely different treatment from that they advised and found so successful the preceding year.

On the other hand there is a large class of clinicians whose names are significant of the best in medical research and whose teaching is listened to with respect from one end of this country to another, but who are so pessimistic as to the treatment, or the management, of disease as to prevent the scientific investigations necessary to develop common sense and rational therapy. These physicians write and teach largely of differential diagnosis, pathologic findings, and of the symptoms of a disease in their totality. They gladly accept, describe and advise any antitoxic or specific treatment that is found valuable in a disease. They also carefully describe and advise physical therapies, climatic changes, and the surgeons describe all the operative interferences to cure disease. But it is exceedingly rare for one of this class of physicians, whose duty it is to teach, to describe or advise the best method of overcoming the many troublesome symptoms that occur in the course of most diseases. Although in their personal practice they overcome difficulties, tide patients over serious conditions, and actually prolong and save life by medicinal treatment as well as by scientific management, they are unwilling, for some unknown reason, to attribute such successful outcome in these cases to the advantages of any drug or set of drugs. They even seem at times to think that it is an acknowledgment of failure, or something derogatory to their prestige, to admit that the proper use of a drug has really caused their general treatment to be a success.

Such lack of scientific therapeutic teaching causes a large number of general practitioners to listen to enthusiastic proprietary detail men and subsequently to use a preparation for a given condition the active ingredient of which the teacher of medicine may have long used, but in a simpler and less expensive manner. The physician using such a preparation and obtaining good results frequently rushes into print and lauds the preparation or combination of drugs as a cure for that condition or disease, when really it is the principle active ingredient of it that did the work, and which perhaps had been used for that purpose for years.

The thing needed, then, in scientific therapeutics is more careful instruction in details by the teachers and bedside clinicians, and, as pointed out by Gottheil, a willingness on the part of the general practitioner to describe his failures as well as his successes. Also the general practitioner who writes of his therapeutic successes should constantly bear in mind, first, the trend of troublesome conditions to recovery; second, that it is not always the last drug, preparation or treatment that benefited the patient, but that the previous treatment really caused the cure; third, that many a new drug or new preparation offered with the enthusiasm of the physician cures a patient by psychologic effect, much as often does a change of physicians or a change of environment.

In this connection a paragraph from an article by W. S. Gottheil, in The Journal, Nov. 21, 1908, may well be quoted:

"The rôle of image-breaker is always an ungrateful one, and especially so in therapeusis. In the face of the essential problem and crux of medical endeavor, positive claims have an authority and a charm that give them every advantage over merely negative criticism. Yet the iconoclast is as necessary as the builder, and sometimes even more so. A franker and freer discussion, less reticence as to failures, and a more judicial attitude toward successes would save much misconception and much useless labor and suffering. An extramedical observer, studying the files of our professional journals, would conclude that there are few if any incurable affections, and that the chief difficulty of the modern therapeutist is the selection of one among the many curative measures that are recommended. How far the facts are in accord with this each one of us can judge from personal experience."

Therapeutics means everything that is of importance to the patient. All the scientific investigations in physiology, etiology and pathology are of no value to him unless the knowledge gained therefrom can be therapeutically applied. While anything that borders on the symptomatic treatment of disease should be discouraged, it is only the consultant, the book on practice, and the lecturer, who may ignore the treatment of troublesome symptoms. The physician's visit to a patient is not of the greatest value, and the consultant has not finished his services until the troublesome symptoms of a patient have been thoroughly discussed and methods devised aiming toward their amelioration. Many a loyal patient has been driven from one physician to another, and finally to quackery, by professional scientific neglect of symptoms which to him appear of most importance.

It is a mistake for a physician to declare that he has cured a disease or condition. What he does do is to "manage" the disease and the patient who has the disease and it is the details of this management, hygiene, nursing, diet, physical treatments and, lastly, medicinal necessities that comprises the totality of the therapy of disease.

It is a mistake, and one that is very prevalent, to believe that therapeutics means medicinal treatment only. Therapeutics covers the whole field of management of disease from the cathartic dose of calomel through a necessary laparotomy, to perhaps a convalescence in southern California. The whole range of what shall be done for a patient with a given condition or disease to the final cure, or death, of that patient is therapy.

A disease can not be correctly treated unless the following facts are considered:

1. Can the etiologic factor in a given disease be discovered, and can it be removed? This is the primary treatment.

2. What physiologic processes in this patient are disturbed by this disease? The aim of all treatment should be the attempt to correct such disturbed physiology, and at the same time not to disturb the normal physiologic processes.

3. The pathologic conditions which are the result of the disease should be removed, if possible; ameliorated, if removal is not possible; and never irritated or made worse by any medicinal or physical treatment. Special care should be taken that whatever treatment is deemed advisable for the patient, it should not aggravate or make worse the pathologic condition present.

4. The symptoms and signs of the disease which in their totality determine the diagnosis, and the extent to which the pathology of the disease has progressed, are in their totality of minor and secondary importance in the treatment. On the other hand, individual troublesome symptoms must be removed or ameliorated, else normal physiologic processes which are necessary to recovery can not be performed, and toxemias that otherwise need not have occurred may perhaps be the determining cause of the non-recovery of the patient.

Of all symptoms, that of pain is the most important and the one from which the patient must have relief. It does not seem to make a great deal of difference whether such pain is pathologically excusable or present only on account of psychologic mistake. the nervous irritability and finally depression caused by it must be taken into consideration and must be treated or, better, managed. At least, pain must be prevented at any cost. This does not mean that the physician should hasten to the use of unneeded narcotics, nor that he should ever use a narcotic without regret and without the extra supervision that should always go with such treatment, but it is the skillful, thoughtful, discriminating physician who can determine the best method of eradicating the symptom of pain in each individual patient.

To carry out the medicinal treatment needed properly to manage a given disease the physician should have his drugs classified as to their utility and select the best drug for each particular object, and the best drug should be decided on after a careful consideration of its complete physiologic action. This means not only its ability to combat the condition under consideration, but also through what organs this drug is excreted, where it causes disturbed physiology, if any, and whether or not it will add to the pathology of the disease present.

Such deliberate decision will select the best drug needed for a given condition in a given patient. This is knowledge, and is not groping after the unknown and mysterious which is always the mental attitude of the physician who prescribes pharmaceutical preparations and nostrums either of unknown ingredients, or, at least, of unknown methods of preparation, which may have added solvents or correctives to a solution that should not be administered to the patient. It also naturally follows that elegance in prescription writing and in the method of administering disagreeable drugs should be taken into careful consideration by the practitioner. Frequent consultations with his pharmacist will enable a physician either to write a prescription that embodies the best method of administering a given drug, or such consultation may develop the fact that this drug is prepared and offered in a simple, satisfactory preparation that does not contain biproducts or ingredients that are undesirable. Simple, elegant preparations offered by pharmaceutical firms are excusable, but it is inexcusable to order the mixtures prepared by these firms. A physician should be able to write a prescription to suit the needs of each individual patient.

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[*For other information see second page following reading matter*]

SATURDAY, MARCH 13, 1909

THE FUNCTION OF THE ADRENAL CORTEX

The importance of the discovery of the blood-pressure-raising substance of the adrenal, and the rapid development of the use of this substance in practical medicine, has caused the fact that the production of adrenalin is not the sole function of the adrenals to become much obscured. According to the experimental and analytical evidence, adrenalin is produced only by the medullary portion of the gland, thus leaving the function of the much more abundant cortical tissue to be explained; and, furthermore, we have clinical evidence that adrenalin does not represent the entire product of the adrenal gland, in the fact that we can not ordinarily relieve the manifestations of Addison's disease by administration of either adrenalin or adrenal extract. We have every reason to imagine that the cortical portion of the adrenals may be functionally entirely different from the medulla. In the first place, the histologic structure is quite different, the medulla having large sinus-like blood channels surrounded by cells which are rich in material staining with chromic acid or its salts, while the cells of the cortex are characterized by their columnar arrangement and their richness in glycogen and lipoids. Embryologically these two portions of the adrenals are even more sharply distinguished, for the medulla is derived from a portion of the sympathetic nervous system and thus traces its origin back to the neural ectoderm, whereas the cortex is derived from the mesodermic epithelium which covers the fore part of the Wolffian body in front of the germinal epithelium. Indeed, in some animals, notably in the elasmobranch fishes, the cortex and the medulla are represented by entirely distinct organs, and the organs which contain the sympathetic nervous elements, representing the medulla of man, are found to yield extracts with the physiologic properties of adrenalin, while the other organ corresponding to the cortical tissue is inert in this respect. In birds, which have a high blood pressure, the medullary elements constitute an exceptionally large proportion of the gland.

In view of the embryologic origin of the cortical elements from a part of the primitive tissue of the urogenital tract, it might be suspected that this particular part of the adrenal is related to the generative organs, and there is much evidence that such is the case. In rabbits the cortex of the adrenal hypertrophies during pregnancy; in frogs seasonal variations in structure occur corresponding to the period of mating; in birds and reptiles the adrenals are in close anatomic relation with the generative glands rather than with the kidneys. Also the histologic structure of the corpus luteum of pregnancy recalls at once the appearance of the adrenal cortex. Pathologic anatomy has given much evidence of this relationship between the adrenal cortex and the generative organs, a subject which has been much considered of late, especially in England, because of the stimulus given by the extensive paper of Bulloch and Sequeira.[1] These authors reported a typical case in which a girl began to menstruate at the age of 10 years, after which there was a rapid development of the generative organs and female characteristics, with marked obesity, and excessive growth of hair on the face as well as on the pubis and axillæ. These changes accompanied the appearance of an abdominal tumor which at autopsy was found to be a tumor of the left adrenal with the structure characteristic of adrenal cortex and of hypernephromas. In the literature they found eleven similar cases, involving chiefly young girls, and all characterized by the association of tumor of adrenal cortex with premature sexual development, excessive growth of hair, and not infrequently pseudohermaphroditism. In addition to these are cases in which precocious development, chiefly in females, has been found accompanied by simple hypertrophy of the adrenals.

If we correlate these observations with the well-known fact that in fetal and infantile life the adrenals are very much larger proportionately than in adults (at the end of the third month of fetal life they are larger than the kidneys, at birth one-third as large, and in the adult but about one-forty-fourth as large), the evidence seems conclusive that the adrenal cortex has to do with development, especially the development of the reproductive organs, and the sexual characteristics. If the size of the adrenal is increased in infancy by either hypertrophy or tumor formation of cortical tissue, this development is stimulated to an excessive degree, and even in adults adrenal tumors may cause excessive growth of hair and change in sexual characteristics, as in the case described recently by Thumim.[2] Tumors of the adrenals not associated with such developmental abnormalities are not rare, but these are usually sarcomas and therefore not new growths of the secretory epithelium. Presumably the influence of the adrenals on growth is not limited to the reproductive organs, for as early as 1806 Friedrich Meckel noticed absence of the sexual organs and adrenals in an acardiac monster, and later observers have noted that defects of development of the cerebrum are commonly associated with aplasia or hypoplasia of the adrenals.

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[1] Tr. Path. Soc. London, 1905, lvi, 189.

[2] Berl. klin. Wchnschr., Jan. 18, 1909, p. 103.

Guthrie[3] has collected reports of cases of precocious physical development, both sexual and somatic, which he finds may assume either an adispose or a muscular type, the former affecting chiefly females and the muscular type occurring only in males. Premature hirsuties occurs in practically all cases of either type, but other evidences of premature sexual maturity are not necessarily present, and in some cases instead of excessive growth of adrenal cortex, tumors have been found in the pineal gland, the testicles, or the ovaries, indicating the interrelation of these four organs.

It is interesting to note the part which these cases of premature development of muscular type have played in mythology and art, in the guise of "infant Samsons" or "infant Hercules." Pliny speaks of a boy who, when he died at the age of 3, had a great voice and was four and one-half feet tall. Craterus also mentions an individual who in the course of seven years was infant, youth, adult, parent and old man, and then died. The gigantic boy of Willingham, Cambridge, born in 1741, weighed fifty-eight pounds at the age of 3. His organs of generation were fully developed, and there was hair on the face and pubes. He died of tuberculosis at the age of 6. Anthony White in 1806 recorded a similar case in a boy aged 3 who was the exact counterpart of the Farnese Hercules, and Guthrie considers it probable that legends of Hercules and Samson were based on individuals with this particular form of giant growth.

THE COLLARGOL INVESTIGATION

The reports of the committee appointed to consider the claims made for collargol by its American agents, which appear elsewhere in this issue,[1] form, we believe, one of the most remarkable contributions ever made to medical literature.

Never before, probably, in the history of medicine has a body of scientific medical men acted in a judicial capacity in a matter of this kind — a matter that would, at first view, seem to be one of apparent insignificance, but which is found on examination to have a most profound significance for the progress of medicine. The amount of labor involved in the investigation, while enormous, has been in the highest degree altruistic, for let the results be what they might, the task was not only a thankless one, but one liable to call forth abuse on those completing it. The fact that men of such standing as those who composed this committee were willing to devote the time and work necessary to the accomplishment of the purpose intended, argues well for the new era in medicine. Five years ago a task of this kind would have been looked on as utopian and visionary, or the problem as one unworthy the serious consideration of scientific men. To-day it is different, for times have changed. The profession has become awakened to the detrimental influences connected with the commercial domination of therapeutics, and is ready and anxious for the truth.

In reading these reports—and every physician should read them—this thought should be kept in mind: The committee was concerned with the advertising matter and not with the value of the drug *per se*. As to the latter, the real value of any drug can only be determined by a sufficient amount of clinical experience, and the best any small group of men can do is critically to examine and report on the results of others. And the evidence in regard to collargol is still so contradictory that a definite judgment as to its final place in therapeutics would be premature. As to the former—that is, the consideration of the advertising matter—its importance will be realized when it is remembered that the vast majority of physicians obtain their first information concerning proprietary remedies from advertising matter, and first impressions are often lasting. In the matter of advertising, deplorable conditions are known to exist. It is somewhat of an excuse for this firm—but it is all the more deplorable from the standpoint of the profession and of the public—that both its claims and its methods of making them are not exceptional nor unusual, but are typical of those that generally obtain.

The reports deal, first and last, with the examination of the evidence on which are based the claims made by the manufacturers, and the question resolves itself into: Does the advertising matter relating to the remedy contain exaggerations, perversions of data or misquotations? The answer to this question by the committee in both reports is unequivocally in the affirmative. Whatever minor differences there may be between the minority and the majority reports, the important and essential fact is the unanimity of the committee in declaring that the advertising matter in question misrepresents the views of the authors quoted. It is misleading, both through exaggeration and through misquotation; it makes a number of assertions for which evidence is lacking; and both by addition and omission it modifies or perverts the opinion of some of the authors cited.

Discriminating physicians are no longer misled by the so-called original article type of testimonials. i. e., those written for financial or other considerations, and which are fulsomely laudatory of the preparation. The literature advertising collargol, however, is not of this nature, but is drawn from scientific sources. The fact, therefore, that the authors, whose work has been misleadingly quoted, are men of standing whose opinions carry weight with the medical profession, makes such perversions of opinions the more reprehensible.

There are few abuses more serious than the misuse for commercial purposes of the work of men high in the medical and pharmacologic worlds. Scientific work of the highest character, if it deals even remotely with a drug to which some firm holds the property right, is likely to be made to do duty as an advertisement. By the skillful separation of sentences or paragraphs from their context, and by the use of introductory phrases which lead the reader to assign to the quotations a meaning altogether different from that intended by the author, it is possible to construct good advertising "copy" from any scientific report. Busy physicians, even though alive to past abuses, and intelligent above the average, have been misled by these perversions of the reports of scientific men and the practice has reached alarming proportions.

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[3] Brit. Med. Jour., Sept. 21, 1907, p. 747.

[1] Collargol: Reports of the Committee Appointed to Consider the Claims Made Regarding Its Effects. Page 862. See also comments in Pharmacology Department, this issue.

It has been the complaint of manufacturers that their products are not the subject of scientific investigation—and with reason. But when scientific men know that the results of their work will be used as a basis for advertisements, that their statements will be distorted and meanings that were never intended will be read into their sentences, is it any wonder that, careful to keep their professional honor unsmirched, they prefer to leave proprietary remedies alone?

We repeat, the work of this committee, irrespective of its findings, argues well for the awakening of the medical profession to one of the most insidious and vicious abuses connected with proprietorship in medicines. It is sincerely to be hoped that the result of this investigation may lead reputable pharmaceutical manufacturers generally to exercise a stricter censorship of their advertising matter.

THE DIAGNOSTIC AND THERAPEUTIC VALUE OF LUMBAR PUNCTURE

It is a good plan to take stock occasionally of procedures which have gained a permanent foothold in the medical armamentarium, partly because the new members constantly added to our ranks may not know the history of them, and partly because familiarity with a procedure tends to make us forget its dangers and drawbacks, which, however, are apt to be overestimated rather than underrated in the beginning. It is now eighteen years since lumbar puncture was introduced by Quincke, and in that time it has gradually progressed from the status of a procedure of occasional value to that of one in daily use.

The originator of lumbar puncture probably did not foresee the different lines along which its application would develop. He may have believed that ordinary chemical and microscopic examination of the fluid withdrawn would mark the limits of its usefulness. Cytodiagnosis in the modern sense, which has added considerably to the diagnostic value of lumbar puncture, was not developed until much later, and spinal anesthesia was practically unknown in 1891. E. Bramwell[1] has recently reviewed the subject in an interesting manner. He does not emphasize the possible dangers of the procedure very strongly, though he urges great caution in performing it in cases of intracranial tumor with increased pressure. The fact that its use in anesthesia has occasionally been followed by myelitis, at times resulting fatally, is not mentioned.

There is no doubt that the value of lumbar puncture under certain conditions is very great, providing that its limitations are recognized, and providing that, like any other single diagnostic procedure, it is interpreted in the light of all the clinical findings. The pressure under which the fluid exudes may give valuable indications of increased intracranial pressure, and the naked eye appearance may be of great value when spinal hemorrhage or meningeal hemorrhage is suspected. The chemical and cryoscopic examinations seem to be of distinctly less value than the bacteriologic and cytologic tests.

In the administration of meningitis serum lumbar puncture has become a *sine qua non,* and not merely a diagnostic and general therapeutic measure in this disease. The value of the cell count is also demonstrated, the lymphocytosis of tuberculous meningitis and of spinal syphilis or tabes, and the pure leucocytosis of non-tuberculous meningitis being often of decided value. The value of the spinal fluid for serologic tests, like the Wassermann reaction for syphilis, is beginning to be appreciated as a result of the work of Noguchi and others. The procedure has certainly come to stay. From the diagnostic standpoint it may be of great value in distinguishing meningitis from hysteria and focal cerebral lesions, in detecting spinal or even cerebral meningeal hemorrhage, in differentiating neurasthenia from the early stages of general paresis, and in allowing the early recognition and treatment of spinal syphilis

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[1] Clinical Studies, vol. vii, pt. 2, 1909.

THE BITING OF MAN BY RAT FLEAS IN RELATION TO PLAGUE

Recent investigations in India and elsewhere have demonstrated beyond doubt that fleas play an important rôle in the transmission of plague from rats to man, and they have especially implicated the common rat flea of India (*Pulex pallidus*), although the *Ceratophyllus fasciatus* has also been shown to be capable of conveying the infection. The importance of the flea as an agent in the dissemination of plague has rendered necessary a more thorough study of these insects.

Since 1907 the U. S. Public Health and Marine-Hospital Service[1] has collected and identified fleas from different ports, particularly in connection with antiplague measures. These studies have demonstrated that the *Pulex pallidus* is commonly found in our country, and that it has a wide distribution. Fox has shown that the *Ceratophyllus fasciatus* and *Pulex pallidus* are the fleas most commonly found on rats in San Francisco, their relative proportions at some seasons being approximately three of the former to one of the latter.[2]

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[1] Annual Report U. S. P. H. and M.-H. S., 1909.
[2] Public Health Reports, Sept. 25, 1908.

Considerable diversity of opinion has prevailed as to whether rat fleas will bite man—an important question in view of the rôle assigned to these insects in the spread of plague. The British plague commission observed that *Pulex pallidus* would feed on a man's hand, and in a series of five experiments they were able to keep this species of flea alive for nearly four weeks on a diet of human blood.[3] Similar experiments have recently been reported by McCoy and Mitzhain, working in the laboratory of the Public Health and Marine-Hospital Service in San Francisco.[4] These observers collected four different species of fleas from rats and ground squirrels, and confined each flea in a separate test-tube. The fleas were then applied to the hand or forearm of a healthy man from time to time. In this manner it was found that the two common species of fleas found on rats in San Francisco. *Ceratophyllus fasciatus* and *Pulex pallidus*, will bite man, the *Ceratophyllus fasciatus* having been kept alive for thirty-five days on a diet of human blood.

Further experiments showed that *Ctenopsyllus musculi* would feed on man as would also the squirrel fleas, *Hoplopsyllus anomalus* and *Ceratophyllus acutus*. In one experiment the common ground-squirrel fleas of California fed readily on man and were kept alive in this manner for twenty-eight days. These studies are important, as they prove that rat and squirrel fleas will bite man.

It has already been shown that fleas transmit plague from rats to man, but the exact method of transmission is still unknown. Such studies should be continued, as they throw additional light on the epidemiology of plague.

PUBLICATIONS ON EXPERIMENTAL MEDICINE OF NEW YORK STATE SOCIETY

Year after year the efforts are renewed by those one-ideaed sentimentalists, the antivivisectionists, to secure the passage of some measure which shall place all forms of experimentation on animals under special restrictions, on the assumption that the already existing legislation against cruelty to animals fails to meet actual or possible wrong doings by the experimenters. As in the case of all people who have fanatically surrendered themselves to an obsessing idea, it is hardly to be hoped that any argument, however cogent, based on whatever array of facts, however overwhelming, will tend to shake their adhesion to the idea which has become to them a fetish. There are, however, many followers at a distance accepting unquestioned the threadbare stock arguments of the professional fanatics, who might perchance realize the truth if it were once placed before them. Again there are others to whom these specious arguments and pleas are being submitted for the first time, and to whom, being in ignorance of the facts, they might appear to bear the stamp of reason. And yet again, and before all, there are those who, having once known the actual facts, in part at least, have forgotten the data on which their knowledge is based. To all these a recapitulation by competent authorities, each in his own line, of specific facts in which actual and practical benefits, not only to the human race, but to the domesticated animal world, have resulted directly and unequivocally from animal experimentation, should prove of the utmost value. It is an admirable and practical work, therefore, that is now being performed by the Committee on Experimental Medicine of the Medical Society[1] of the State of New York, in issuing a series of articles bearing on the legitimacy and necessity of animal experimentation and demonstrating the perniciousness, as well as the utter lack of justification, for any form of special legislation in restriction of such experimentation. Among the papers that have recently come under our notice are "Animal Experimentation and Diabetes," by Dr. Graham Lusk; "Ethics of Animal Experimentation," by Dr. John Dewey; "Animal Experimentation as Viewed by the Superintendent of a Hospital," by Rev. G. F. Clover; "The Service of Animal Experimentation to the Knowledge and Treatment of Nervous Diseases," by Dr. Charles Dana; "The Relation of Animal Experimentation to the Live Stock Industry," by Dr. V. A. Moore; "Animal Experimentation and Nutrition," by Prof. L. B. Mendel; and "Why Are Special Laws to Restrict Animal Experimentation Unwise?" by Dr. John G. Curtis. These articles are full of the right kind of information, tersely enunciated in the right manner.

THE REPORT OF THE HOMES COMMISSION AND THE ATTEMPT TO SUPPRESS IT

One of the most interesting and valuable of government documents issued for many years is the "Report of the President's Homes Commission" which has recently appeared. It is a 400-page book, filled from cover to cover with data and suggestions of much more than ordinary interest. Those parts dealing with sanitation and with the drug habit will appeal to physicians as particularly opportune and to the point, and the public generally will have its eyes opened to the viciousness of self-drugging and the frauds in patent medicines and quackery. Its educative value is so great, and the general scope of its inquiry so excellent, that when the daily papers recently asserted that an effort was being made in the United States Senate to prohibit the transmission of the document by the United States mails, it was difficult to accept the statement seriously. There seems no doubt, however, that pressure is being brought to bear in an endeavor to limit the circulation of this valuable and instructive book. According to the papers, objection is made to that part of the commission's report which deals with social betterment. This chapter, it is claimed, is "too broad in dealing with the social evil." As a large portion of the part referred to is made up of quotations from various high-class magazines, among them the *Ladies' Home Journal* and *Collier's Weekly,* the accusation would seem to be in the nature of a joke. The question at once arises, why this objection to frankness and ingenuousness on a subject of vital importance? There seem to be two possible answers: First, the document is the result of a commission appointed specially by President Roosevelt, and the Senate—or many members of it—has an antipathy toward anything Rooseveltian. Second, that part of the report which deals with fakes and fakers, chiefly of the medical type, calls attention to the incalculable value of the "fraud order" system of the postoffice department in putting out of business the various get-rich-quick concerns that infest the country. With the part played by the postoffice secret service agents—regarding land schemes—still fresh in our minds, it is not difficult to imagine that some members of the upper house are likely to estimate the value of the work of the postoffice department from a personal rather than from a civic standpoint. One result of this unfortunate attack will be the whetting of the appetites of that portion of the public to whom anything of a supposedly salacious nature appeals. In fact, as the newspapers stated at the time, "the document rooms of the House and Senate were completely stripped of the home commission reports during the day." It is to be hoped that the report of the President's Homes Commission may not be denied transmission in the mails, but, on the contrary, that it may have the wide circulation which, from its very evident usefulness, it deserves.

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[3] Jour. of Hyg., 1907, vii, No. 3, p. 473.
[4] Public Health Reports, Feb. 19, 1909.

[1] 17 West Forty-third St., New York City.

WORK OF THE AMERICAN CIVIC ASSOCIATION

The American Civic Association is carrying on an educational, suggestive and cooperative campaign in several directions for the esthetic and sanitary welfare of the community. In the former regard it is taking much needed measures to prevent the destruction of those wonderful natural beauties, the falls of Niagara, at present threatened by a greedy commercialism that sees no limits to the supremacy of what it terms utility over the esthetic sense, forgetful of the fact that the esthetic sense itself is an important utilitarian factor in the moral and mental welfare of the human race. Another abomination against which it has set itself is the fungating excrescence of unsightly billboards disfiguring the country. In cities, at any rate, these hoardings —as has been recently pointed out in relation to board fences by Dr. W. H. Atkinson,[1]—have a sanitary aspect. The third object, and the one most directly in line with public hygiene, is the advocacy of public comfort stations in our large cities. In this respect the United States is far behind all European cities. If the American Civic Association can aid in the more general adoption of these important necessities for the public health it will certainly accomplish a praiseworthy work.

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1. Washington Med. Ann., January, 1909.

The Fossil Man of Chappelle-aux-Saints.—The *Semaine Médicale* of Paris. Dec. 23, 1908, contains a description of the recently discovered fossil skeleton in a cave near Corrèze. It represents a type below any previously discovered, resembling more the anthropoid apes than the human type.

Medical News

CONNECTICUT

Bequest to College.—By the will of the late Dr. Gurdon W. Russell, Hartford, of the class of 1834, Trinity College, his alma mater receives a bequest of $5,000 for the natural history department and its laboratory.

Change in Medical Course.—With the beginning of the new year the course in the Yale Medical School is to be changed. For admission to the school there is required the equivalent of two years of work of college grade, including preparatory work in general chemistry, biology and physics. The general plan of the new curriculum is that before beginning the clinical studies of the last two years, the student must have completed the required course in anatomy, physiology, organic and analytical chemistry, histology, embryology, bacteriology, pathology and laboratory courses in pharmacology.

GEORGIA

State Sanatorium for Tuberculosis.—The first meeting of the board of trustees of the State Tuberculosis Sanatorium was held February 11. Dr. Thomas R. Whitley, Douglasville, was elected president, and Dr. Marcus F. Carson, Griffin, secretary. The following committees were named: Plans, Drs. P. S. Clark, Darien, and Charles H. Richardson, Montezuma; rules, Dr. Marcus F. Carson; and bids and regulations, Drs. E. Everett Daniels, Moultrie; Charles F. McLain, Calhoun; Jeff Davis, Toccoa, and William P. Crawford, Lincolnton.

Society Meetings.—At the annual meeting of the First District Medical Society, held in Statesboro January 27, Dr. John K. Train, Savannah, was elected president; Dr. Alfonso J. Mooney, Statesboro, vice-president, and Dr. John F. S. Sigman, Savannah, secretary. It was decided to hold the next session in Savannah in June.——At the annual meeting of Worth County Medical Society, held in Sylvester January 20, Dr. W. C. Tipton was elected president; Dr. W. K. Stewart, vice-president; Dr. Guy G. Lunsford, Sylvester, secretary, and Dr. Valter P. Stevens, Poulan, delegate to the Medical Association of Georgia.——Sumter County Medical Society, at its annual meeting, elected Dr. Robert E. Cato, president; Dr. J. Richmond Statham, vice-president; Dr. Douglas B. Mayes, secretary, and Dr. F. B. Gregory, delegate to the Medical Association of Georgia.

ILLINOIS

Prohibits Distribution of Medicine Samples.—The Hoopeston city council recently passed an ordinance prohibiting the throwing or distribution of "patent-medicine" samples on doorsteps, sidewalks, streets, and alleys of the city. Samples may be left at any residence if handed to an adult.

Staff Organizes.—The physicians' staff of St. Anthony's Hospital, Rockford, met for organization February 26, and elected the following officers: President, Dr. W. Grant Hatch; vice-president, Dr. Emil Lofgren, and secretary-treasurer, Dr. George P. Gill.

INDIANA

Hospital News.—Representative men of the state are making a strong endeavor to raise a fund of $300,000 for the establishment of the Children's Hospital of Indiana. Drs. Francis O. Dorsey and Edward F. Hodges are vice-presidents of the association, and Drs. John J. Kyle, Louis Burckhardt, H. R. Allen, Oscar N. Torian, Jewett V. Reed, Edward F. Hodges, and Francis O. Dorsey, all of Indianapolis, are the medical members of the incorporators.——The new De Kalb County Infirmary, built at a cost of $28,000, was opened January 25.

Vital Statistics for January.—The State Board of Health reports that tonsillitis was the most prevalent disease in January as in December; that pneumonia, sixth in area of prevalence, advanced to second place in January, and that bronchitis, influenza, scarlet fever, and measles were unusually prevalent. There were reported 145 cases of smallpox in 24 counties with no deaths; 170 cases of diphtheria in 45 counties with 24 deaths; about 500 cases of scarlet fever with 9 deaths; 352 deaths from tuberculosis; 367 from pneumonia; 115 from accident; 32 from suicide, and 11 from homicide. During the month 2,744 deaths were reported, equivalent to an annual rate of 11.8 per 1,000.

MARYLAND

Addition to Hospital.—Three large wards are to be added to the United States Naval Hospital, Annapolis, at an expense of $83,000. One ward will be a general ward and two will be isolated wards.

Library to Be Dedicated.—The new library building of the Medical and Chirurgical Faculty of Maryland will be dedicated during its meeting in Baltimore May 13-15. Dr. William Osler, to whose suggestion the building is due, is to be the orator of the occasion.

Medical Society Meeting.—At the annual meeting of the George's Creek Medical Society, held in Frostburg, February 25, the following officers were elected: President, Dr. Timothy Griffith, Frostburg; vice-presidents, Drs. James O. Bullock, Lonaconing, and James H. Carpenter, Midland; secretary, Dr. James C. Holdsworth, Eckhart, and treasurer, Dr. W. Oliver McLane, Frostburg.

Personal.—Dr. Clemens von Pirquet, the new pediatrist of Johns Hopkins Hospital, Baltimore, was the guest of honor at the annual dinner given by the trustees of the hospital to the medical board, March 2.——At the meeting of the Johns Hopkins Hospital Club March 8, the program included a paper on "Frère Jacques" by Dr. Howard A. Kelly, and one on "Areteus the Cappadocian," by Dr. Eugene F. Cordell.

Defends Its Members.—The council of the Medical and Chirurgical Faculty of Maryland has decided to undertake the defense of Dr. William S. Love, Baltimore, a member who has been sued for alleged malpractice. About five years ago the society adopted the plan of defending its members in such cases without further charge than the membership fee. Several suits have been instituted and some have gone to trial, but in every instance a successful defense has been made. This is one of the advantages offered to the profession by the state society and is duly appreciated by the profession.

Work of the State Board of Medical Examiners.—The president of the State Board of Medical Examiners, Dr. Herbert Harlan, Baltimore, reports the following work of his board in the prosecution of charlatans: In July E. Frederick Morris pleaded guilty and was fined $50 and costs. In August Joseph Politzky was indicted and subsequently, on conviction, given sixty days in jail. In September, Mary Allen, colored, was convicted and fined $25 and costs. Morris Schlein was convicted and fined $20 and costs, and Aristide Giampietro was fined $50 and costs. William G. Thomason was held for court, but being unable to obtain bail, was kept in jail until his trial, when he was paroled. Robert H. Darrah, —— Wilmore, and John Anderson, the last two colored, have been indicted, and their cases are pending in the criminal court. H. W. Swartz, a cancer specialist from Oxford, Pa., was indicted, but will probably get off on a demurrer.

NEW HAMPSHIRE

Acquitted.—Dr. Herbert A White, North Hampton, charged with murder in the second degree on account of the death of Mary A. Lane by alleged criminal operation, was acquitted February 2 after trial in the superior court at Exeter.

New Constitution.—A conference of the secretaries of county medical societies was held at Concord February 9, under the presidency of Dr. D. Edward Sullivan, secretary of the New Hampshire State Medical Society, to consider the new constitution of the society.

To Reorganize Medical Board.—A bill has been presented to the legislature, which has for its object the reorganization of the State Board of Medical Examiners. At present the board consists of nine members, three each from the regular homeopathic and eclectic schools. The new bill contemplates a board of five members made up without distinction as to school of medicine.

Society Election.—At the fortieth annual meeting of the Manchester Medical Association, held February 18, Dr. William H. A. Lyons was elected president; Dr. Walter T. Crosby, vice-president, and Dr. George C. Wilkins, secretary-treasurer. Drs. Henry A. Christian, dean of Harvard Medical School, and Timothy Leary, instructor in pathology in Tufts Medical School, were guests of honor at the banquet. Dr. Christian delivered an address on "Modern Methods of Investigation in Medicine as Illustrated by Recent Work on Nephritis," and Dr. Leary discussed "Newer Therapeutic Measures of Laboratory Origin."

Hospital Bulletin.—A new quarterly has appeared in Manchester, entitled the "Bulletin of the Beacon Hill Hospital Staff." The reason of being of this publication is said to be the necessity for a channel through which each member of the staff of Beacon Hill Hospital might concentrate his thought on one or more direct lines, and by so doing each would receive benefit from the other's work, and the spirit to always be alert thereby entertained. It is to be compiled from writings of the members of the staff who will also furnish and make reports of interesting cases. The first issue contains three articles by one member of the staff and one each by three other members.

NEW JERSEY

Money for Hospital.—Mercer Hospital, Trenton, was made the beneficiary of the annual charity ball and received $1,800 from this source.

Expelled by Society.—Dr. Albert J. Daly, Bayonne, is said to have been expelled from the Bayonne Medical Society because of his alleged violation of a rule forbidding the making of contracts with fraternal societies for medical aid for their members. Dr. Daly is said to have admitted that he broke the rule and declared that other members of the society had done likewise, and that it was not fair to make him the scapegoat.

Personal.—Drs. Charles L. Ill, Newark, and August A. Strasser, Arlington, have resigned from the medical staff of the German Hospital, Newark.——Dr. William H. McKenzie, Newark, has been appointed physician of Essex county.——Dr. Horace N. Parker, Trenton, is ill with diphtheria at Skillmans.——Dr. G. Howard McFadden, Hackensack, has been appointed physician of Bergen county.——Dr. John C. Loper has accepted temporarily the position of health officer of Bridgeton.——The Gloucester County Physicians' Protective Association has elected Dr. Duncan Campbell, Woodbury, president; Dr. William Brewer, Woodbury, vice-president, and Dr. Harry A. Stout, Wenonah, secretary.

NEW YORK

Henry Bausch Dead.—Henry Bausch of the Bausch & Lomb Optical Co., Rochester, died March 2, in Augusta, Ga., where he had gone for his health.

County Tuberculosis Hospital.—The supervisors of Ontario county voted February 24 to erect a tuberculosis hospital for the county at a cost of $15,000.

Amalgamation.—At a special meeting of the Rochester Academy of Medicine, February 24, questions were considered relative to the amalgamation of the Rochester Pathologic Society with the academy.

Sale of Cocain Restricted.—According to the annual report of the State Board of Pharmacy, the law recently passed regulating the sale of cocain is very effective. Complaint is made in the report that actions for the adulteration of drugs fail because of local prejudices in favor of the defendants.

Friends Pay Fine.—Dr. Snyder, Niagara Falls, who was said to have been fined $25 recently for practicing his profession in Niagara Falls, Ont., has written a letter to the press in which he states that several of his Canadian friends have subscribed the amount of his fine and returned it to him. He furthermore says that he will use this sum, together with fees derived from practice in Ontario until June, for the endowment of a bed in the Niagara Falls General Hospital to bear his name.

Personal.—Dr. Walter C. Klotz, assistant physician at the Stony Wold Sanatorium of Tuberculosis, has been appointed superintendent and medical director of the Vermont State Sanatorium, Pittsford, vice Dr. Henry D. Chadwick, resigned. ——Dr. James A. Lyon has resigned as physician at the Loomis Sanatorium, Liberty, and has been appointed official state examiner of candidates for admission to the Massachusetts State Sanatorium, Rutland, with an office at the Massachusetts General Hospital, Boston.

Free Dispensary Opened.—The managers of the St. Lawrence State Hospital, Ogdensburg, announce that there has been established at the institution a free dispensary where indigent persons, suffering from incipient mental or nervous affections, may consult the physicians of the hospital and receive advice. The dispensary will be open on Saturdays from 10 a. m. to 3 p. m. The hospital will not attempt the treatment of such cases, but they will be referred back to the family physician, and a letter will be sent to him summarizing the neurologic and mental findings, and advising as to the management of the case and its medical and hygienic treatment.

To Decrease Death Rate.—To diminish the loss of life in the state is the purpose of a recent communication and blanks sent out by the State Department of Health. The blank forms are a yellow card for the individual reports of tuberculosis by the physician; the statement of procedures and precautions to be taken on the premises of a tuberculosis patient, by the attending physician or health officer; the and *Collier's Weekly*, the accusation would seem to be in the nature of a joke. The question at once arises, why this objection to frankness and ingenuousness on a subject of vital importance? There seem to be two possible answers: First, the document is the result of a commission appointed specially by President Roosevelt, and the Senate—or many members of it—has an antipathy toward anything Rooseveltian. Second, that part of the report which deals with fakes and fakers, chiefly of the medical type, calls attention to the incalculable value of the "fraud order" system of the postoffice department in putting out of business the various get-rich-quick concerns that infest the country. With the part played by the postoffice secret service agents—regarding land schemes—still fresh in our minds, it is not difficult to imagine that some members of the upper house are likely to estimate the value of the work of the postoffice department from a personal rather than from a civic standpoint. One result of this unfortunate attack will be the whetting of the appetites of that portion of the public to whom anything of a supposedly salacious nature appeals. In fact, as the newspapers stated at the time, "the document rooms of the House and Senate were completely stripped of the home commission reports during the day." It is to be hoped that the report of the President's Homes Commission may not be denied transmission in the mails, but, on the contrary, that it may have the wide circulation which, from its very evident usefulness, it deserves.

WORK OF THE AMERICAN CIVIC ASSOCIATION

The American Civic Association is carrying on an educational, suggestive and cooperative campaign in several directions for the esthetic and sanitary welfare of the community. In the former regard it is taking much needed measures to prevent the destruction of those wonderful natural beauties, the falls of Niagara, at present threatened by a greedy commercialism that sees no limits to the supremacy of what it terms utility over the esthetic sense, forgetful of the fact that the esthetic sense itself is an important utilitarian factor in the moral and mental welfare of the human race. Another abomination against which it has set itself is the fungating excrescence of unsightly billboards disfiguring the country. In cities, at any rate, these hoardings —as has been recently pointed out in relation to board fences by Dr. W. H. Atkinson,[1]—have a sanitary aspect. The third object, and the one most directly in line with public hygiene, is the advocacy of public comfort stations in our large cities. In this respect the United States is far behind all European cities. If the American Civic Association can aid in the more general adoption of these important necessities for the public health it will certainly accomplish a praiseworthy work.

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[1] Washington Med. Ann., January, 1909.

The Fossil Man of Chappelle-aux-Saints.—The *Semaine Médicale* of Paris. Dec. 23, 1908, contains a description of the recently discovered fossil skeleton in a cave near Corrèze. It represents a type below any previously discovered, resembling more the anthropoid apes than the human type.

Medical News

CONNECTICUT

Bequest to College.—By the will of the late Dr. Gurdon W. Russell, Hartford, of the class of 1834, Trinity College, his alma mater receives a bequest of $5,000 for the natural history department and its laboratory.

Change in Medical Course.—With the beginning of the new year the course in the Yale Medical School is to be changed. For admission to the school there is required the equivalent of two years of work of college grade, including preparatory work in general chemistry, biology and physics. The general plan of the new curriculum is that before beginning the clinical studies of the last two years, the student must have completed the required course in anatomy, physiology, organic and analytical chemistry, histology. embryology, bacteriology, pathology and laboratory courses in pharmacology.

GEORGIA

State Sanatorium for Tuberculosis.—The first meeting of the board of trustees of the State Tuberculosis Sanatorium was held February 11. Dr. Thomas R. Whitley, Douglasville, was elected president, and Dr. Marcus F. Carson, Griffin, secretary. The following committees were named: Plans, Drs. P. S. Clark, Darien, and Charles H. Richardson. Montezuma; rules, Dr. Marcus F. Carson; and bids and regulations, Drs. E. Everett Daniels, Moultrie; Charles F. McLain, Calhoun; Jeff Davis, Toccoa, and William P. Crawford, Lincolnton.

Society Meetings.—At the annual meeting of the First District Medical Society, held in Statesboro January 27, Dr. John K. Train, Savannah, was elected president; Dr. Alfonso J. Mooney, Statesboro, vice-president, and Dr. John F. S. Sigman, Savannah, secretary. It was decided to hold the next session in Savannah in June.——At the annual meeting of Worth County Medical Society, held in Sylvester January 20, Dr. W. C. Tipton was elected president: Dr. W. K. Stewart. vice-president; Dr. Guy G. Lunsford, Sylvester, secretary, and Dr. Valter P. Stevens, Poulan, delegate to the Medical Association of Georgia.——Sumter County Medical Society, at its annual meeting. elected Dr. Robert E. Cato, president; Dr. J. Richmond Statham, vice-president; Dr. Douglas B. Mayes, secretary, and Dr. F. B. Gregory, delegate to the Medical Association of Georgia.

ILLINOIS

Prohibits Distribution of Medicine Samples.—The Hoopeston city council recently passed an ordinance prohibiting the throwing or distribution of "patent-medicine" samples on doorsteps, sidewalks, streets, and alleys of the city. Samples may be left at any residence if handed to an adult.

Staff Organizes.—The physicians' staff of St. Anthony's Hospital, Rockford, met for organization February 26, and elected the following officers: President. Dr. W. Grant Hatch; vice-president. Dr. Emil Lofgren, and secretary-treasurer, Dr. George P. Gill.

INDIANA

Hospital News.—Representative men of the state are making a strong endeavor to raise a fund of $300,000 for the establishment of the Children's Hospital of Indiana. Drs. Francis O. Dorsey and Edward F. Hodges are vice-presidents of the association, and Drs. John J. Kyle, Louis Burckhardt, H. R. Allen, Oscar N. Torian, Jewett V. Reed, Edward F. Hodges, and Francis O. Dorsey, all of Indianapolis, are the medical members of the incorporators.——The new De Kalb County Infirmary, built at a cost of $28,000, was opened January 25.

Vital Statistics for January.—The State Board of Health reports that tonsillitis was the most prevalent disease in January as in December; that pneumonia, sixth in area of prevalence, advanced to second place in January, and that bronchitis, influenza, scarlet fever, and measles were unusually prevalent. There were reported 145 cases of smallpox in 24 counties with no deaths; 170 cases of diphtheria in 45 counties with 24 deaths; about 500 cases of scarlet fever with 9 deaths; 352 deaths from tuberculosis; 367 from pneumonia; 115 from accident; 32 from suicide, and 11 from homicide. During the month 2,744 deaths were reported, equivalent to an annual rate of 11.8 per 1.000.

MARYLAND

Addition to Hospital.—Three large wards are to be added to the United States Naval Hospital, Annapolis. at an expense of $83.000. One ward will be a general ward and two will be isolated wards.

Harry P. Pomerene, Canton.——At a recent meeting of the Stark County Medical Society, Dr. Jacob F. Marchand was elected president; Dr. George F. Zinninger, secretary-treasurer, and Dr. Arthur J. Hill, corresponding secretary, all of Canton.——Members of the Jackson County Medical Society have formed two classes to pursue the course of postgraduate study suggested by the American Medical Association.

PENNSYLVANIA

Antivivisection Loses.—After the consideration of the antivivisection bill, which absolutely prohibits vivisection, the senate committee on health and sanitation has announced that an adverse report will be made.

Railway Surgeons Elect.—At the annual meeting of the *Pittsburg and Lake Erie Railway Surgeons' Association*, held in Pittsburg February 18, Dr. John D. Milligan, Pittsburg, was re-elected president; Dr. J. S. Lauthan, Beaver Falls, vice-president, and Dr. Edward M. Island, secretary-treasurer.

State Law on Spitting.—Senator Sproul has introduced a bill which imposes a fine on persons who expectorate in public places, such as the street, railway trains and public conveyances. A fine of from $5 to $50 is the penalty attached for violation of the law, and constables are permitted to arrest violators without warrant.

Personal.—Dr. Raleigh R. Huggins has resigned as gynecologist to St. Francis' Hospital, Pittsburg.——Dr. Joseph R. Swartzlander has been elected burgess of Doylestown.——Dr. Charles A. Rahter, Harrisburg, who has been seriously ill with pneumonia, is reported to be improving.——Dr. Harry J. Donaldson, Williamsport, has been added to the staff of consulting physicians of the Cottage State Hospital, Blossburg.——Dr. Walter W. Palmer, Erie, was operated on in New York City for mastoiditis, February 10.

Donation to Jewish Sanatorium.—The latest donation to the new Philadelphia Sanatorium for Consumptive Jews at Eagleville, Montgomery county, is the gift of the entire site on which the institution is being erected. The land will cost $7,000, and is the gift of the Independent Order of Brith Shalom. Besides this gift, the organizers have raised $5,000 in cash and have secured the pledges of many persons to erect shacks in which the consumptives may live. The sanatorium is to be located on a seventy-acre farm in a very fertile valley and will be ready for occupancy May 1.

Vital Statistics.—During December, 16,185 births and 9,045 deaths were reported in the state. Chief among death causes were pneumonia, 1,127; violence, 835; tuberculosis, 767; nephritis, 493; diseases of early infancy, 469; cancer, 352; diarrhea and enteritis, 272; diphtheria, 254; typhoid fever, 182; scarlet fever, 117; influenza, 91; whooping cough, 72, and measles, 55. During January there were 10,755 cases of communicable diseases reported, including 2,382 cases of measles, 1,791 of scarlet fever, 1,265 of diphtheria, 1,225 of chickenpox, 1,131 of tuberculosis, 1,040 of pneumonia, 921 of typhoid fever, 525 of whooping cough, and 233 of mumps.

New Medical Societies.—The Pathological Society of Pittsburg was organized February 22, with an initial membership of sixteen, and the following officers: President, Joseph H. Barach; vice-president, Dr. Ernest W. Willetts, and secretary, Dr. Shaul George.——A Physicians' Club has been organized at New Wilmington, which will eventually be affiliated with the Lawrence County Medical Association. Dr. Herbert E. Barr is president; Dr. William A. Clark, Jr., secretary, and William L. Smith, treasurer of the organization.——The Woman's Medical Society of Pittsburg was organized February 4, with the following officers: President, Dr. Adaline M. Watson; vice-president, Dr. Luba M. Goldsmith; recording secretary, Dr. Bertha Dornbush; corresponding secretary, Dr. Elizabeth L. Martin, and treasurer, Dr. Katherine Cook.

Compromise on Medical Bill.—As a result of the consideration of the new medical bill before the senate committee on health and sanitation, March 2, a compromise was effected by the different schools of medicine. Under the terms of the compromise an amendment was agreed on, whereby the board of medical examiners, to be appointed by the governor, shall consist of three regulars, three homeopaths and two eclectics. The osteopaths will not be represented, but the state will officially recognize them by licensing osteopaths who are graduates of regular schools or colleges of osteopathy, who have practiced two years, and who have passed the examination of the state board. After 1912 all persons desiring to practice osteopathy must be graduates of an osteopathic college, and to obtain a physicians' certificate, must pass the state examination. All persons who are now practicing osteopathy may continue to do so, but can not procure physicians' certificates unless they are graduates of regular osteopathic colleges and have passed the state examination.

Philadelphia

Dinner to Dr. Mills.—The friends of Dr. Charles K. Mills throughout the country give a testimonial dinner in his honor at the Bellevue-Stratford, March 13, and present him with a loving cup. The affair is in charge of a committee composed of Drs. William W. Keen, Wharton Sinkler, James H. Lloyd, William G. Spiller, Francis X. Dercum, chairman, and David Reisman, secretary.

Personal.—Dr. Joseph P. Tunis sailed for Europe March 4.——Dr. S. Lewis Ziegler has recovered from his severe attack of facial erysipelas and has sailed for Europe.——Dr. Alfred Gordon has been elected a member of the Société Médico-Psychologique of Paris.——Dr. R. Davis Webb is said to have been committed to the State Hospital, Norristown.——Dr. G. Morley Marshall is taking a hunting tour in Africa.

Water Sterilizers for Schools.—Urged by the health authorities to adopt some means to prevent the spread of typhoid fever and kindred diseases among the pupils of the public schools, the Board of Education, some time ago, equipped seven grammar schools and one high school with water sterilizing plants. The results have been so gratifying in reducing the percentage of diseases in these schools that it is now planned to give wider scope to the experiment. Similar plants will be installed in all public school buildings now in course of construction or to be erected, and the authorities are looking forward to the period when every school building will furnish its pupils with pure drinking water.

Officers Elected.—At the annual meeting of the Section of Ophthalmology of the College of Physicians, Dr. William Zentmayer was elected chairman and Dr. Thomas B. Holloway, clerk.——The Philadelphia Neurological Society has elected the following officers: President, Dr. Theodore H. Weisenburg; vice-presidents, Drs. H. H. Donaldson and George E. Price; secretary, Dr. Alfred R. Allen; treasurer, Dr. John H. W. Rhein; and council, Drs. James W. McConnell, William G. Spiller and Augustus A. Eshner.——The Philadelphia Academy of Surgery has elected the following officers: President, Dr. William J. Taylor; vice-presidents, Drs. Robert G. LeConte, G. Wilym G. Davis; secretary, Dr. Charles F. Mitchell; treasurer, Dr. James P. Hutchinson; and recorder, Dr. John H. Jopson.——At the regular meeting of the Northwestern Medical Society the following officers were elected: President, Dr. Clarence P. Franklin; vice-president, Dr. James T. Schell; secretary, Dr. Harry Hudson; treasurer, Dr. Ellis E. W. Given; and censors, Drs. Nathan G. Ward, William McKeage and Samuel M. Wilson.

VIRGINIA

New Medical Association.—The Isle of Wight Medical Association was organized January 4, with the following officers: President, Dr. John S. Marshall, Smithfield; vice-president, Dr. Gavin Rawls, Carrsville, and secretary-treasurer, Dr. R. Lee Seward, Isle of Wight.

Railway Surgeons Appointed.—Dr. William K. Vance, Bristol, chief surgeon of the Virginia and Southwestern Railway, has made the following staff appointments: Dr. Thomas F. Staley, Bristol, oculist; and local surgeons, Drs. William R. Rogers, Bristol; Lewis E. Mock, Mountain City, Tenn.; Joseph S. Donnelly, Shouns, Cross Roads, Tenn.; David R. Stout, Butler, Tenn.; Eugene E. Hunter, Elizabethton, Tenn.; Henry F. Alexander, Elizabethton, Tenn.; Edward S. King, Bluff City, Tenn.; C. G. Martin, Mendota, Va.; C. T. Barker, Gate City, Va.; Lucian B. Horton, Gate City, Va.; Joseph P. Trent, Clinchport, Va.; James W. Kelly, Big Stone Gap, Va.; William G. Painter, Big Stone Gap, Va.; Morand L. Stallard, Appalachia, Va.; Nicholas I. Ardan, Keokee, Va., and Emmett H. Pomeroy, Black Mountain, Va.

WASHINGTON

Society Meeting.—At the annual meeting of Chehalis County Medical Society, held in Aberdeen, Dr. George E. Chamberlain, Aberdeen, was re-elected president; Dr. Adelbert J. McIntyre, Hoquiam, was elected vice-president, and Dr. Clayton E. Bartlett, Aberdeen, secretary-treasurer.

Opposes the Use of Liquors.—Seventy-five of the 220 members of the King County Medical Society, on February 15, voted for the amendment prohibiting the expenditure of the society's funds in the purchase of alcohol, malt or fermented beverages to be consumed at the stated social functions of the society.

Antituberculosis Society Organized.—The King County Association for the Prevention and Relief of Tuberculosis was organized at Seattle January 26. Among the organizers were Drs. E. R. Kelly, Elmer E. Heg, Clarence A. Smith, James E. Crichton, Stuart V. R. Hooker, Ivar Jansen, William A. Shannon, Park W. Willis and Kenelm Winslow.

Expelled from Society.—Dr. J. Ellery Fales, health officer of Walla Walla, is said to have been expelled from Walla Walla Valley Medical Association, February 23, on the ground that he had acted in an unseemly manner, privately, officially and professionally. Dr. Fales claims that more than fifteen of the practitioners of Walla Walla have not taken the state examination, and that among these are the foremost ones that have charged him with incompetency. As health officer of the city, Dr. Fales has sent out orders that all physicians shall obey carefully the state laws on vital statistics and health regulation.

WISCONSIN

Tuberculosis Exhibit.—The State Tuberculosis Exhibit at the International Tuberculosis Congress, together with reproductions of other important exhibits, prepared by the department of bacteriology of the state university and the Wisconsin Antituberculosis Association, is being exhibited in the cities of the state, remaining from three to five days in each locality.

Change in Management of Sanatorium.—As the result of a difference of opinion between the State Board of Control and the management of the State Tuberculosis Sanatorium, Wales, Dr. Paull, superintendent, has resigned, and Dr. M. K. Greene, first assistant at the State Hospital for the Insane, Mendota, has been placed in temporary charge of the institution. Dr. J. W. Coon, formerly of Milwaukee, who was offered the position of superintendent, is said to have accepted February 28.

WEST VIRGINIA

Site Not Satisfactory.—The site for the State Sanatorium for Tuberculosis offered by Levi P. Morton at Red Sulphur Springs is not satisfactory to the West Virginia Tuberculosis Commission on account of its inaccessibility, the scarcity of sunlight and the bad condition of the buildings already on the ground.

Society Meetings.—At the annual meeting of the Brooke County Medical Society, held in Wellsburg, Dr. John P. Johnston, Wellsburg, was elected president; Dr. Joseph B. Palmer, Wellsburg, vice-president, and Dr. William T. Booher, Bethany, secretary.——Kanawha County Medical Society, at its annual meeting held in Charleston, elected the following officers: Dr. George C. Schoolfield, president, and Dr. Charles O'Grady, vice-president; and re-elected Dr. Peter A. Haley, secretary, and Dr. Edgar B. Fridenwald, treasurer, all of Charleston.——Cabell County Medical Society, at its annual meeting held in Huntington, elected the following officers: President, Dr. Edward S. Buffington; vice-president, Dr. Joseph E. Rader; secretary, Dr. James R. Jones; treasurer, Dr. Isaac R. Le Sage, and censors, Drs. Karl C. Pritchard and George W. Tooley, all of Huntington.——At the annual meeting of Harrison County Medical Society, held in Clarksburg, the following officers were elected: President, Dr. Jesse S. Maloy, Shinston; vice-president, Dr. Charles W. Halterman; treasurer, Dr. Benjamin F. Shuttleworth; censor, Dr. David P. Morgan; and delegates to the state association, Drs. E. Newton Flowers, Harvey V. Varner, and David P. Morgan, all of Clarksburg.——Marion County Medical Society has elected the following officers: President, Dr. Henry R. Johnson; vice-president, Dr. James A. Graham; secretary, Dr. James W. McDonald; treasurer, Dr. William H. Sands, all of Fairmont; censors, Drs. Edward W. Howard, Fairmont, James A. Riedy and Claude L. Holland, Fairmont, and delegates to the state association, Drs. James J. Durrett and William C. Jamison, Fairmont.——The Little Kanawha and Ohio Valley Medical Society, at its meeting in Parkersburg, re-elected the following officers: President, Dr. Thomas A. Harris, Par kersburg; vice-presidents, Drs. E. T. Castro, Parkersburg, Archibald Bee, Cairo, and J. Young; secretary, Dr. C. J. Scott; assistant secretary, Dr. Rolla Camden; treasurer, Dr. C. W. Hudson, and councilors for Wood county, Drs. Benjamin O. Robinson, Thomas J. Maguire and Will S. Keever, Parkersburg; for Wirt county, Dr. Alexander J. Mitchell, Burning Springs, and for Jackson county, Dr. Jacob E. Barrows, Ravenswood.

GENERAL NEWS AND COMMENT

Reward for Typhoid Cure.—The Mexican Academy of Medicine has offered a reward of 50,000 pesos (nearly $25,000) for the cause of and to ascertain a cure for the disease. Of this, 20,000 pesos are to be awarded to the person discovering the specific for the disease, 20,000 to the individual discovering the serum which will kill the typhoid germ in the blood, and 10,000 will be distributed among the persons who have most efficiently helped in the solution of the problem.

The Prevention of Blindness.—No one nowadays doubts that a large percentage of blindness in children is the result of neglect to put into effect well-recognized prophylactic treatment. For this reason the necessity is generally acknowledged for routine prophylactic treatment by Credé's or by some similar method. This is emphasized in a pamphlet, "Children Who Need Not Have Been Blind," published by the special Committee on Prevention of Blindness of the New York Association for the Blind. The gonococcus is no respecter of persons, and is often found where least expected, so that a prophylactic measure that under no circumstances does harm, and does good in all cases where indicated, should become a routine practice. The educational and missionary work done by the committee is in the highest degree commendable, and, appealing as it does to the public at large, and especially to midwives, who do so much of the obstetric work in the poorer districts of large cities, should prove an effective factor in lessening the dreadful scourge of preventable blindness in infants.

CANADA

Congress of Physiotherapeutics.—A number of the physicians of Montreal will participate in the second Congress of Physiotherapeutists to convene in Paris, April 13. Dr. Michel D. Brochu, Quebec, is honorary president of the Canadian Committee; Dr. Charles N. de Blois, Three Rivers, acting president; Dr. Henri Lasnier, Montreal, general secretary.

Gifts for McGill.—A friend of McGill University, Montreal, has promised to donate $100,000 to that institution, as soon as the balance of $500,000 is raised. Another friend has made an unconditional donation of $25,000 to the university. McGill needs $2,000,000: but the corporation has decided to let this stand for the present, and to endeavor to get subscriptions for the $400,000 required to ensure the delivery of the $100,000 promised.

Personal.—Lieut.-Col. Herbert S. Birkett, M.D., Montreal, was elected president of the Association of the Canadian Army Medical Corps at its recent annual meeting in Ottawa.——Dr. Thomas W. Jeffs has resigned his position as medical health officer of South Vancouver, B. C.——Dr. Charles W. Duval, who for the past two years has been pathologist to the Montreal General Hospital and lecturer in pathology in McGill University, has been appointed professor of pathology in Tulane University, New Orleans.

Marine Hospital in British Columbia Poorly Provided.—Recently an order was sent from Ottawa refusing admission to seamen from coasting steamers to the Marine Hospital in British Columbia, and it has caused a great deal of dissatisfaction, owing to the fact that the hospital in the past has been largely used for these seamen. Last year there were less than 100 patients in the hospital, and very few of these were sent in from the deep-sea steamers, for which purpose the marine hospital primarily exists, and who pay the bulk of the sick mariners' fund. The hospital is said to be poorly equipped, and it is claimed that the physicians will not allow serious cases to be handled there. It is supplied with but twenty beds. There is an operating room, but no surgical instruments are provided. Recently an inspector from the Department of the Interior at Ottawa, under whose administration Canada's marine hospital service is conducted, visited this hospital and the order for curtailment followed.

Reciprocity in Western Canada.—There was held recently in the Medical Library of Winnipeg a meeting of the physicians of that city and surrounding country to discuss the proposed measure of reciprocity among the provinces in western Canada, namely, Manitoba, Saskatchewan, Alberta and British Columbia. Dr. Robert G. Brett, Banff, Alberta, was the principal speaker of the evening, and advocated the establishment of a central western examining board for the abovementioned provinces, stating that his province of Alberta was strongly in favor of the scheme. This would mean one examination and one license for the four provinces. Although the measure for Dominion Registration advocated some years ago by Dr. Roddick is still on the statute books of Canada, it has never become law, owing to the fact that it has been opposed by Ontario and Quebec. It is proposed to call a meeting of the medical men of the west at the time of the meeting of the Canadian Medical Association at Winnipeg in August. Meanwhile delegates will visit in the different provinces and get the individual opinions of the members of the profession on the question.

New Medical Act for British Columbia.—A new medical act for the Province of British Columbia is being promoted in the legislature of the province in the interests of the British Columbia Medical Council. The proposition with regard to the licensing of osteopaths is a unique feature of the measure. The clause relating thereto is as follows: "Nothing in this act shall prevent or prohibit any duly qualified osteopath from practicing his profession for reward or gain within the province of British Columbia from and after the passing of this act; provided, that all practitioners of osteopathy within the meaning of this act shall be duly qualified osteopaths of a recognized school or college of osteopathy; and for the purposes of this act, a recognized school or college of osteopathy shall be deemed to be an institution recognized by the American Osteopathic Association; provided, further, that before any such osteopath shall be lawfully entitled to practice osteopathy within British Columbia, such osteopath shall take and successfully pass an examination satisfactory to the council in the following subjects: Anatomy, physiology, chemistry, toxicology, pathology, bacteriology, histology, neurology, physical diagnosis, obstetrics, gynecology, minor surgery, hygiene, medical jurisprudence, principles and practice of osteopathy. The council, for the purpose of such examination of applicants for registration as osteopaths under this act, shall appoint an osteopath, who shall prescribe the examination for such applicants in relation to the principles and practice of osteopathy. Any duly qualified osteopath who shall successfully pass such examination shall be restricted and shall be entitled to be registered under this act, as a member of the college: provided, that such osteopath shall be restricted wholly to the practice of osteopathy."

FOREIGN

Helmholtz Medal Goes to E. Fischer.—At the recent annual meeting of the Prussian Academy of Sciences, at Berlin, the Helmholtz medal was awarded to Emil Fischer, the well-known professor of chemistry at Berlin, who was the first to produce albumin by synthesis. By a curious coincidence the only other beneficiary was another E. Fischer, the professor of anatomy at Feiburg. He was granted about $1,250 for anthropologic research on the cross-breed population of Africa.

The Catastrophe in Southern Italy.—The *Policlinico*, Feb. 14, gives a list of the medical men known to have lost their lives in the earthquake at Messina, fifty-one in all. Only nine left surviving children, including six boys between 3 and 15 and one girl of 17. Our exchange refers in moving terms to the physicians who survived the disaster, but whose losses in family, friends and property make them envy the fate of those buried under the ruins. The *Policlinico* in a previous issue referred to the action of the Rome correspondent of the *Munchener medizinische Wochenschrift* in appealing to the physicians of Germany for aid for the stricken medical men in Sicily, deploring it as an act of weakness to appeal for outside help. At the same time it expresses deep appreciation and gratitude for aid from outside spontaneously rendered. The appeal in our German exchanges for contributions to the international fund, "Pro Italia medical," is signed by a numerous committee, the list of names filling nearly a whole column of solid type, with von Bollinger of Munich as chairman. The amount contributed in Germany to the fund was 3,780 marks ($950), February 16. Dr. Calendoni of Naples was in one of the first medical relief parties at the scene of the disaster, and he summarizes his impressions in a communication in the *Presse Médicale*, February 13. He estimates the number of dead throughout the quake district as about 200,000. Many lives were lost in the flight in the darkness of the night and the thick dust that filled the air when the persons had escaped the shock of the earthquake. Many instances of serious mental disturbance were encountered with entire absence of physical injury. Numbers of the rescued were in a kind of stupor, apathetic, speaking of their losses as if they did not concern them or had happened twenty years ago. He noticed that the pupils were dilated in most of these persons, and some of the facial muscles were contracted. So many persons escaped from upper stories by letting themselves down by sheets tied to the windows, that these floating sheets gave a peculiar aspect to the ruins. In some cases every bone in the body seemed to be fractured, including the skull and vertebræ, but fracture of the femur was most common. Complications began to develop after the first few days, phlegmons, gangrene and tetanus, the latter appearing about the eighth day. The gangrene occurred in parts that had been long under crushing pressure. A number of cases of catalepsy, chorea and epilepsy were observed, and many of the survivors succumbed to acute respiratory affections, the result of exposure to the rain and cold. As late as the fourteenth day twenty-seven persons were saved; many had had nothing to eat during this period. The fifteenth day a little girl of three was rescued safe and sound after her long fast. A few were found alive the nineteenth day, but most of these human larvæ, he says, succumbed soon after their deliverance. One lad of 9 succeeded in making his way out from under the ruins the nineteenth day. The childish mind could not grasp the catastrophe, and the children were in good spirits as a rule. Two little ones were found playing merrily on a bed with some kittens in the midst of ruins that had buried all their family. One boy injured himself severely in digging all day but his face was radiant as he had finally rescued his father. It was a great field for the neurologist, but there was no time and no one had the sang-froid for specialist research then.

LONDON LETTER

(From Our Regular Correspondent)

London, Feb. 27, 1909.

The Polyclinic

The difficult financial position of the Polyclinic has been mentioned in a previous letter. The annual subscription of $5 has never been sufficient to pay the expenses and left the large sum of $4,500 to be raised by class and laboratory fees and increased subscriptions which had to be solicited again. To help remedy this, 174 subscribers expressed their willingness to subscribe various amounts which would increase the income by $1.500. As the Polyclinic was still faced by a large deficit it was determined to close it, but Sir Jonathan Hutchinson, who may be regarded as its founder, munificently undertook for two years to provide the deficiency. Capt. Hayward Pinch, who has ably filled the position of medical superintendent for nearly ten years, has to the great regret of everyone resigned his post, as he has been appointed director of the radium institute. Some valuable additions have been made to the Hutchinson Museum, and the whole collection is now classified and arranged in such a manner as to permit of speedy and easy reference.

Congress on Tropical Diseases in India

A congress on tropical diseases, opened at Bombay February 22, was attended by representatives of all parts of India and by Professors Ronald Ross of Liverpool and Shiga of Japan and Dr. Musgrave of the Philippines. This is the first congress of the kind and it has created widespread interest. All the Indian administrations deputed delegates and local bodies and individuals provided ample funds. There were five sections which sat for three days, and papers were read covering every branch of tropical disease. The proceedings were opened by the governor, Sir Charles Clake. In a paper on "Malaria," Professor Ross urged the government to set aside from the sanitary budget for the prevention of malaria a sum proportionate to the mortality from the disease. He advocated the destruction of mosquitoes in large towns, quininization in rural areas, and both methods combined during malarial epidemics. In a combined paper, Captain Christophers and Dr. Bentley discussed "The Human Factor in the Causation of Malaria." They found that in a community composed of malaria-stricken subjects in a state of physiologic poverty, infection diminished very slowly, even in the absence of the anopheles. This factor of residual infection might thus convert the whole community into a reservoir of infection, ever ready to involve its neighborhood in an epidemic and capable, on migration, of diffusing malarial infection far and wide.

National Tuberculosis Conference

A National Conference on Tuberculosis has been held in London, the object being to arouse the nation to a sense of its duty in the eradication of a disease which is preventable and yet causes more deaths than all other diseases combined. The conference is of a popular rather than a scientific nature, though papers have been contributed by various medical authorities. Archdeacon Sinclair, who presided at the opening meeting, said that physicians had done *their utmost in fighting* the disease and the public must now do their share.

PARIS LETTER

(From Our Regular Correspondent)

Paris, Feb. 23, 1909.

The Reorganization of Medical Studies

An official decree of January 11 last has reorganized the medical curriculum along the lines I outlined *in* The Journal, Sept. 19, 1908, page 1023, and Jan. 9, 1909, page 145. The minister of education has now sent to all the institutions involved a circular relative to the application of this decree. The minister recalls the long time spent in deliberation on the details of the reform; the investigations made from the start among all the faculties of medicine: the labors of the commission of 77 members, which includes not only professors of the faculties and medical schools, but members of parliament, men especially qualified by their work; physicians to the hospitals, and representatives of the principal medical associations. The minister says that it is reasonable to hope that a decree which has been *prepared with so much care* will contribute notably to the betterment of the course of medical study: "fortifying at the same time by assiduous and methodical frequenting of *clinics and laboratories* the scientific and professional education of the future physician, impressing on him by all possible means and in all forms the habit of observation and *experimentation*, developing in him at the same time the sense of duty and responsibility—such is the end proposed. The faculties and medical schools will undoubtedly understand how important it is *that the application* of all the provisions of this decree should be surrounded by the most serious safeguards." Before fixing the date at which the reform shall come into force the minister desires to be informed precisely what measures the faculties intend to take to ensure the new organization in the best conditions possible. He invites them to deliberate on the matter and requests their opinion before the first of May.

The International Sanitary Office

As I mentioned in one of my previous letters, the delegates of the various countries which took part in the international sanitary conference, which assembled at Rome in December, 1907 met again at Paris, in November last, and proceeded to organize *the bureau of the international sanitary office* (see editorial in The Journal, February 27, page 708). This office has just been installed at 195 Boulevard Saint-Germain. It will *centralize all the information concerning the great* epidemic maladies, such as cholera, plague and yellow fever. It will indicate to the participating governments the modifications *that should be made in international sanitary* agreements, in order more effectively to combat these scourges and to prevent their propagation by circumscribing the foci of infection. The *office* will publish *collective* studies on the course of epidemics throughout the entire world and will publish the general regulations promulgated by the various sanitary *administrations. The first task of the sanitary* office will be to occupy *itself* in arresting the ravages of cholera which continues to flourish in Russia, and *to prevent its transmission to other European countries. The office* will also investigate what measures are to be taken to meet the danger created by direct railroad communication between Mecca and Syria. This is a situation demanding urgent regulation by appropriate international measures, which the office will have to study and point out to the interested governments.

The Medical Charges in Industrial Accidents

Of late abuses have been noted in regard to *the medical expenses that employers* or insurance companies are called to pay for the professional aid rendered to the victims of industrial accidents. With a view to remedying this *abuse*, as much as possible, the minister of labor recently appointed a special commission, composed of physicians and surgeons to the hospitals, to seek for an equitable *adjustment* of the medical charges *in the* matter of industrial accidents. The minister requested this *commission* to examine whether for the principal classes of accidents it might be possible to estimate the normal duration of the period of incapacity for work on which to base an estimate of proper medical charges. The commission, after studying and discussing the question, unanimously reported that under existing conditions the data both of *information* and clinical experience are insufficient to allow of such an estimate.

The Chair of History of Medicine and Surgery

The professors of the medical faculty of Paris at a board meeting nominated Chauffard as first choice and Duprê as second choice for the chair of the history of medicine and surgery, to succeed Prof. Gilbert Ballet, who has been appointed clinical professor of mental pathology and diseases of the brain. The names of these *candidates* were *accordingly* presented to the minister of education as the choice of the faculty.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, Feb. 18, 1909.

Modifications in the Requirements for the Medical Degree

The requirements for the title of doctor of medicine in the Berlin University have been lately considerably simplified to keep pace with modern progress. The dissertation in Latin was long ago dispensed with. The fees for the ordinary examination, the "*Kolloquium*," have been reduced from 440 to 300 marks ($110 to $75) and in the exceptional cases in which the severer examination, the "*Rigorosum*," is taken, from 660 to 500 *marks* ($165 to $125). The public *presentation* and disputation of a thesis are now abolished, as well as the Latin doctorate oath. The dissertation need no longer be on a strictly medical theme, but any subject bearing *an instructive* relation to medicine as a science or art may be *chosen. In* the *Rigorosum* examination pharmacology may be offered instead of physiology. The certificate of attendance at lectures has been also dropped from the requirements at Berlin, as an experiment. This was done at Bonn some time ago. This requirement was quite superfluous and served only to annoy both students and professors, while it failed to secure the attendance of students to the end of the semester. The students *often got* their comrades to certify to their attendance and left town before the lectures were over.

Call of Professor Pfeiffer to Breslau

As intimated in my previous letter, Pfeiffer, one of the youngest pupils of Koch, and who, as is well known, was the discoverer of the influenza bacillus, has *taken* the place of Flügge at Breslau.

The Conflict at Cologne

The trouble between the physicians and the *insurance* societies at Cologne still continues. The "*Krankenkassen*" have been able to secure *only fifty-two* physicians, and as these are *not enough to care for the insured, trouble is anticipated* shortly and it is believed that the government will be compelled to take *a* hand. It is of course impossible to predict in what direction the *influence of the authorities* will be exerted.

Army Sanitation

British authorities have published a comparison of the morbidity and mortality in the armies of the various nations which, according to the opinion of Dr. Schwiening, staff *physician of the German war department*, does not correctly represent the facts. According to the British figures the admissions for sickness per 1,000 of the force were for Great *Britain and Ireland*, 438: *for France*, 670; for Germany, 610.4; for Austria-Hungary, 1,179.8, and for Russia, 412.2. The British figures, however, are based on admissions to hospital, those of the other nations include also ambulant patients. If these were added, the number for Great Britain would rise to 931.5. It is *impracticable* for various reasons *to compare* the British army with other armies, and Dr. Schwiening concludes that the statistics referred to are liable to give false impressions of the real condition as *to* the health of the various armies.

Twenty-fifth Anniversary of the Discovery of the Cholera Bacillus

In the *Deutsche medizinische Wochenschrift*, February 14, Professor Fischer, the hygienist in Kiel, gives an interesting review of the circumstances and effects of the discovery of the cholera bacillus which was announced in this same *journal* just twenty-five years *before*. He recalls that this discovery has been influential in overthrowing the theory of Pettenkofer that the virus of cholera must be matured in *the soil*, and it has demonstrated the *possibility* of transmission of cholera by drinking water so that the character of preventive measures against this disease has been changed to *correspond* with those employed against other *infectious* diseases. The success of this method has been manifested anew during the recent epidemic in Russia: by the earliest possible diagnosis and isolation of cholera cases, Germany has been kept free from the spread of cholera since the great epidemic at Hamburg in 1892.

Sunday Rest for Pharmacists

In Saxony the Minister of the Interior has directed that pharmacies shall close at 1 p. m. on Sundays and holidays instead of 2 p. m., as hitherto, thus securing an additional hour of rest. The *Verein Berliner Apotheker* has for some time been trying to ensure a period of rest on Sundays by providing for alternate closing of the drug stores in various parts of the city, but the plan has not succeeded on account of the opposition of a large proportion of the proprietors.

Influence of Antitoxin on Diphtheria Mortality

As some epidemiologists do not yet admit the value of antitoxin in lowering the mortality from this disease, new statistics on this subject are still of value. Some recently published in the *Archiv für klinische Chirurgie* show that between 1882 and 1893, 71.2 per cent. of the tracheotomized children died, while from 1903 to 1908 only 35 per cent. died. Of those who were not operated on, 26.3 per cent. died in the former period and only 9.11 per cent. in the latter. That the mortality is greater the later the injection is deferred, is shown by the fact that only 6.98 per cent. died of those in whom the injection was made on the first day of the disease, while of those not receiving the antitoxin until the sixth day, 45 per cent. died.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, Feb. 23, 1909.

Report of the Street Ambulance Corps for 1908

The statistical and financial year-book of the Vienna *Rettungsgesellschaft* for 1908 gives some interesting facts and figures in regard to the work done by the ambulance corps. Altogether, 30,762 cases were dealt with, an average of 85 daily. Among these were 6.980 sudden attacks of illness, 9,828 accidents and injuries, 980 suicides, attempted or accomplished, 345 cases of sudden attack of mania, and 12.520 cases of illness requiring the patient's removal from his home to the hospital. In 145 instances so-called flying ambulances were established; that is, ambulances were provided prophylactically, so to speak, whenever it was thought that the presence of a multitude of people (as, for instance, when the pageants and public spectacles in celebration of the emperor's jubilee last year drew immense crowds) might give rise repeatedly to the need for medical assistance. These flying ambulances have proved very satisfactory and have received the approval of the authorities. Apart from the aid thus rendered, the corps deserves credit for its training, given to men and women, in the work of first aid. No less than 1.900 persons, drawn from all classes of the population, were trained last year in 20 "Samaritan classes." The Samaritan expedition to the seat of the Italian[1] earthquake could not well be included in the report, as it took place on the last day of the year. The entire expenditure for the year, including a special donation of $5.000 for an accident station, to be erected soon, amounted to only $52,000, while the income was about $15.000 more, all from private contributions. The *Rettungsgesellschaft*, now in its twenty-seventh year, is a favorite with the people, because neither racial nor religious prejudices are allowed to play any part in its management or administration, which can not be said of all our charitable institutions. It was founded under the shadow of the awful disaster in 1881, when the municipal theater burned down and 800 persons perished for want of organized immediate aid. Since then the excellent organization of the *Rettungsgesellschaft* has served as a model for numerous ambulance corps in Germany, England, France and Italy. In fact, its abolition would now mean a serious calamity for this city. Its medical staff consists of 20 doctors; there are 22 attendants; and the equipment comprises 70 cars, besides 2 automobile cars, specially fitted for emergency cases and the transportation of patients, and the 3 kitchen cars previously mentioned.

The Use of Tobacco in Austria

Within the last ten years the use of tobacco has increased in this country by nearly 75 per cent. The minister of finance is well satisfied with the revenue thus obtained, but the medical aspect of the matter is not so satisfactory. The increase is due chiefly to the improved quality of cigarettes, of which more than 2,500,000,000 were smoked last year; the heavier cigars were also largely used, while the lighter cigars, with a nicotin percentage of 2.5 to 3.5, were rather neglected. The pipe is not very much used here. At the instance of medical authorities, the government has introduced "nicotin-free" cigars—so called, but really only nicotin-poor—the original nicotin content having been artificially reduced to about one-fourth of the original amount. There has been no increasing demand for this kind of cigars and cigarettes. It has been found that the industrial classes consume no more tobacco than do the agricultural classes, though, naturally, in towns there is more of a tendency to smoke to excess. The cigarette accounts for the extension of the habit of smoking to women and to children under 16. It has been estimated that, taking the male population of Austria between the ages of 20 and 60 as a basis of calculation, and making no allowance for the numerous non-smokers of cigarettes, the daily average of cigarettes smoked is about five for each individual. The snuffing of tobacco has become almost unknown here. The entire demand for snuff did not exceed two tons last year for a population of about 27,000,000.

Celebration of the Hundredth Anniversary of Darwin's Birth

The Vienna medical and biologic societies have each recently commemorated the hundredth anniversary of Darwin's birth by impressive exercises. Prof. B. Haatschek, speaking before the *Biologische Gesellschaft*, pointed out how Darwin's theories had enabled others to erect a definite structure of ontology and phylogenesis. The municipality of Vienna paid its tribute to the great man by naming a street in his honor.

Pharmacology

ADVERTISED CLAIMS FOR COLLARGOL

Report of the Council on Pharmacy and Chemistry

The attention of the Council on Pharmacy and Chemistry has been called repeatedly to the extreme and extravagant claims made for collargol, a product which the Council has accepted. The following are examples of such claims and appear in the advertising matter distributed by Schering & Glatz, the American agents for the preparation:

> "COLLARGOLUM
>
> "Is a powerful and harmless systemic antiseptic in the most varied medical and surgical infections. It checks *beginning* sepses and often effects brilliant recoveries in desperate ones. Recent investigations show that with its direct bactericide energy it exerts a marked electrolytic [*] and leucocytogenetic action, and thus greatly aids the natural protective forces of the body.
>
> "Used topically, by mouth, rectally, intravenously or by inunction, Collargolum forestalls the development of sepsis from accidental or operative wounds or child-birth, arrests beginning medical and surgical infections, and often achieves brilliant recoveries in apparently hopeless cases."

Since these and similar claims were considered extravagant and unwarranted, a motion was adopted to rescind the approval of collargol and to publish the reasons therefor. Later, this action was reconsidered in part, and in place of it, it was moved that the matter be referred to a committee of three—a surgeon, a pharmacologist and an internist—to be composed of men not members of the Council. Dr. J. T. Bottomley, Boston, Dr. C. W. Edmunds, Ann Arbor, and Dr. David L. Edsall, Philadelphia, were appointed and accepted the position.

Schering & Glatz, having been advised of the appointment of this committee, objected and requested that Dr. S. Solis Cohen, Philadelphia, Dr. Reid Hunt, Washington, D. C., and Dr. Roswell Park, Buffalo, N. Y., be added to the committee. This request the Council agreed to and these gentlemen were asked to serve. Drs. Cohen and Hunt accepted the position, while Dr. Rosweil Park declined to serve. Accordingly, the committee was constituted as follows: Dr. Edsall, chairman;

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[1] The Journal, Feb. 13, 1909, p. 573.

[*] When action was first taken Messrs. Schering & Glatz asserted that the Council misquoted one claim and said "We never asserted that Collargolum possessed a marked 'electrolytic' action." When referred to their own pamphlets for verification, they replied that the word "electrolytic" was "a typographical error for electrocatalytic." Later Schering & Glatz said: "Our friends state that in speaking of the actions of Collargolum the word 'electrocatalytic' should be modified to read 'catalytic' . . . "

Dr. Edmunds, Dr. Bottomley, Dr. S. Solis Cohen and Dr. Hunt. It should be noted that while the members of the committee selected by the Council were non-members of the Council, Dr. Edsall was later appointed a member by the board of trustees.

Two reports have been submitted by the committee, a majority report signed by Drs. Bottomley, Edmunds, Edsall and Hunt, and a minority report signed by Dr. Cohen. Both reports agree on the point at issue, viz., that the advertising matter issued by Schering & Glatz is misleading, both through exaggeration and misquotation.

It was moved that both reports be accepted and published, and that the thanks of the Council be extended to the members of the committee. The motion having been adopted, the reports of the committee were sent to Schering & Glatz, who replied, and their reply was submitted to the committee. The committee reported to the Council recommending minor changes in the report. The Council then voted to adopt the report as amended and directed publication. In accordance with this action, the majority and minority reports of the committee are published, appearing on page 862 of this issue.

W. A. Puckner, *Secretary.*

THE NECESSITY FOR PURE FOOD LAWS

Some Analyses Made by the New Hampshire State Board of Health

To one interested in the subject of adulteration and sophistication of food, drug and liquor products, the twentieth report of the New Hampshire State Board of Health will prove interesting reading. In that portion of the report dealing with food, drug and liquor inspection, chemist C. D. Howard gives the results of the examinations of 856 samples of food, of which no fewer than 319, or 37.2 per cent., failed to conform to the pure food law. As it was the practice only to collect such brands as there was reason to think were sophisticated, the proportion is probably higher than would prevail generally.

"SOFT DRINKS"

Attention is called to the composition of many of the artificially colored concoctions sold as "tonics" and "soft drinks" now on the market. We are told that many of "these preparations consist of nothing more than sweetened carbonated water colored with anilin dye and flavored with compounds prepared solely from chemicals. Bottlers are continuing to label such products in generous-sized type as 'strawberry,' 'raspberry' and 'blood orange,' the only concession made to the food act being the statement in small type on the *cap* of the bottle: 'Artificial color and flavor.'"

The results of the examinations of 19 of these preparations show that benzoate of soda, saccharin, salicylic acid, sulphurous acid and chemical dyes all enter into the composition of "soft drinks."

CATCHUP

While in the manufacture of catchup the New Hampshire law "allows the use of benzoate of soda in quantity not exceeding 0.1 per cent., provided the presence of such is stated," the chemist states that the present sentiment of food inspection officers is "practically unanimous in opposing the use of preservatives in this and other articles of food. . . ." He calls attention to the fact that some of the leading manufacturers have entirely discarded the use of preservatives, and he adds that it is "probable that the only thing that will deter other concerns from eventually adopting the same practice will be either the lack of proper sanitary methods of manufacture or the use of refuse material—or both."

Of 7 brands of catchup examined, all containing either benzoate of soda or salicylic acid, four were colored artificially, one was sweetened with saccharin and the presence of preservatives was not declared on the label in four.

VINEGARS

In discussing vinegars, the report says: "The argument that 'vinegar is vinegar and one kind is as good as another,' is not true, and it is but right that the purchaser, as well as the grocer, should, for his own protection, have some means of knowing the grade and variety of goods with which his order is filled." That this position is tenable is shown by the results of 24 analyses made of cider vinegars in which the chemists were obliged to adjudge the products "spurious," "not genuine," "below standard," "artificially colored," "distilled vinegar sold as cider vinegar," and so on.

FLAVORING EXTRACTS

Probably the greatest degree of sophistication is found in preparations of this class—lemon, vanilla and orange extracts. Of lemon extracts examined, 64 per cent. were not conformable to the law, while of the vanilla and orange extracts the percentages of non-conformity were 44 and 54, respectively.

PRESERVES

A preparation sold as "raspberry preserve" was found on analysis to consist mainly of apple stock and was, therefore, illegally labelled. The same material—apple stock—was found to compose very largely a "raspberry jelly," which was examined, while a "currant jelly" contained "little if any currant."

OTHER ANALYSES

In addition to the numerous analyses of foodstuffs, Chemist Howard gives the results of his investigation of several "patent medicines" and liquors. Among the former is Rupert Wells' fake "cancer cure," Radol. We understand that the New Hampshire Board of Health brought this nostrum and its method of exploitation to the attention of the Postoffice authorities, whose "fraud order" against Rupert Wells was the subject of an article in The Journal, Feb. 20, 1909.

This and similar work that is being done by several of the more progressive state boards of health is the highest kind of public service, not only for the specific information that is thus furnished, but for its educational value.

Ecthol

To the Editor:—Can you give me any information concerning "Ecthol" (Battle & Co.), marketed as an "alterative and antiseptic"? In one instance I have unwillingly prescribed it, with apparently no effect.

W. D. Chapman, M.D., Silvis, Ill.

Answer.—Ecthol, advertised in a style typical of nostrums, is said to contain as its active ingredients *Echinacea angustifolia* (Pale Purple Cone Flower) and *Thuja occidentalis* (Arbor Vitæ). Neither of these drugs is official in the U. S. Pharmacopeia and information concerning their therapeutic value amounts practically to unverified claims that they are useful as alteratives and in certain inflammatory conditions. The viciousness of vaunting an internal remedy for serious septic conditions without ample basis of fact is self-evident. A pamphlet before us, entitled "Ecthol in the Sudan," is a fine example of nostrum advertising, calculated to captivate the unthinking physician with its show of science and to mislead him into believing that the remedy exploited has been endorsed by high authority. It begins with a eulogy of the Wellcome Research Laboratory at Khartum, Sudan, and its second report, and the work of the laboratory is described and praised. In close connection with this praise of legitimate scientific work, we are told that ecthol is used in the Sudan, "and that it is regarded as almost a specific in certain classes of diseases." The reader is left to infer that its use is described in the report, although the advertiser is careful not to say so. Three pictures of patients with smallpox, chickenpox and syphilitic ecthyma, respectively, are reproduced from the report and without apparent break in the article we are told that "it is in precisely such cases that ecthol gives its most striking results." Of course, the Wellcome Research Laboratory report contains no such mention of ecthol. While such attempts to bolster up a preparation by weaving its praises into an account of a strictly scientific report may be "good business," it is in fact *prima facie* evidence of the valuelessness of a remedy apparently unable to stand on its own merits.

Correspondence

Benzoate of Soda in Foods

To the Editor:—The preservative question, more especially regarding the influence on health of sodium benzoate, may be considered from a different point of view than that taken in your recent editorials. You state that the experiments of the referee board extended over a period of four months while those conducted in the Department of Agriculture extended over nearly a year. The facts are that the department subjects each received 35 grams or less of benzoic acid or sodium benzoate during twenty days and in a supplementary study 12.5 grams during ten days; while the subjects of the referee board each received about 125 grams of sodium benzoate during ninety days. Furthermore, the results in the two series are in substantial agreement. I clearly pointed out, before the report of the referee board was announced (*Medical Record*, Jan. 2, 1909, p. 16), the evidence presented in Bulletin 84, Part IV, does not establish any injurious effect of benzoic acid and the benzoates; there was simply an error in the interpretation of the results.

It is fair to believe that a board composed of men of such scientific attainments and unimpeachable reputation has employed the degree of caution in the wording of their decision that the results call for. When, therefore they state as a general conclusion "Sodium benzoate in small doses (under 0.5 gram per day) mixed with the food is without deleterious or poisonous action and is not injurious to health" it is difficult to understand why the verdict is not positive and to the point. I believe those capable of appreciating it without bias see in this report the conclusion that benzoates in themselves are harmless.

Those who have opposed the use of sodium benzoate on the score that it is harmful now declare that its use is objectionable because it may cover inferior raw material. This is an evasion of the original point and obviously an after thought; furthermore, it is not supported by any evidence. All physicians and food experts are agreed that objectionable raw material should not be used in the preparation of food. As to that, however, the very use of this preservative tends to raise the quality rather than lower it, as appears from a consideration of the catsup industry. Here tomato pulp is kept for a variable interval pending the preparation of the final product. Sodium benzoate causes the pulp after one cooking to keep without fermentation or molding. When a preservative is not used frequent cookings are necessary; moreover masses of mold must be removed by straining. This has the effect of making the final product more concentrated but removes the fresh vegetable flavor and hence impairs the condimental value of the product. It is stated that in this concentrated form the purchaser receives greater value, but as catsup is a condiment, not a food in the caloric sense, the loss of vegetable flavor detracts immeasurably more than the greater concentration adds to its value. Indeed, the whole argument against sodium benzoate produces the impression of an effort to mislead the public rather than to give due regard to the facts.

E. E. Smith, M.D., New York.

Practice of Medicine by the Unfit

To the Editor:—It is a matter of sincere regret that such contributions to the discussion of present day treatment of disease of the value, intelligence and beneficence of the article entitled "The Practice of Medicine by the Unfit," by the Rev. George A. Gordon will receive but little attention from those lay journals who find the "featuring" of the newest of these propagandæ a matter of interesting news. In a long newspaper account of a Sunday sermon preached recently at a university chapel, the marvelous cures of a "young woman," a "district attorney" and a "wild young man" were given as exhibits of the working powers of a specified cure.

As a matter of fact the only real thing to marvel at in the whole affair is that newspaper readers should find such literature translated from the advertising to the reading columns of their journals and promulgated from the purlieus of a university by a theologian instead of from the headquarters of a medicine concern by an Indian or a herb doctor. Photographic, documentary and legal evidence long ago convinced even the most skeptical of newspaper readers that such recoveries were of at least daily occurrence among many of our "best" people who publicly patronized, extolled and partook of the many lavishly and legitimately advertised remedies but recently in vogue.

It seems a long cry from a panacea in a bottle to mere "talk" as a means of cure and from newspaper and out door advertising to the utilization of a famous seat of learning as an agent of publicity, but the proceedings of the Sunday above referred to would appear to have encompassed both these ends for the latter dispensation in a highly finished and gratifying manner.

John P. Davis, New York.

Wells, Darwin and Haeckel and the Doctrine of Evolution

To the Editor:—All thinkers are one in admiring Ernst Haeckel, who has retired after giving to the world important, if not indispensable science.

A meritorious esteem existed between Darwin and Haeckel. Darwin exalted Haeckel's perception of evolutionary principles, while Haeckel praised Darwin's discovery of the principle of natural selection, the law of organic evolution, which science considers the greatest light to lead to biologic truth.

Haeckel exhaustively reviews the history of evolution but omits the name of Wells, and thus commits a great error, for this omission, due to a lack of information, is inexcusable, inasmuch as Haeckel had as good an opportunity as Darwin to learn of Wells' work in biology.

William Charles Wells, of Charleston, S. C. solved the problem and turned over to thinkers and doers the key to unlock, in a more or less routinary way, the door leading to the sublimities of life, that all inquiring minds might see for themselves.

N. B. Jenkins, M.D., New York.

Queries and Minor Notes

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address but the request of the writer not to publish name or address will be faithfully observed.

SENSITIZATION AND DIPHTHERIA ANTITOXIN

To the Editor:—From several notices of deaths following the administration of diphtheria antitoxin I have gathered the impression that when a person is sensitized antitoxin is no longer safe. This if true is so very important that I want to have a clearer understanding of it. Just what is meant by sensitized? What produces the condition and how long does it last?

N. F. Cheever, Greenfield, N. H.

Answer.—The condition of sensitization is one that has been frequently discussed both in the editorial and news columns of The Journal, but as there seem to be many who are in doubt as to the exact status of the subject we will here recount its chief features.

When an animal receives a single dose of almost any sort of soluble protein by subcutaneous, intravascular or intraperitoneal injection it becomes after a period of ten days or two weeks susceptible to a second injected dose of the same protein, so that this protein is now extremely toxic for the animal and may cause its death in a few minutes. Not all animals react alike in this respect, guinea pigs being most readily sensitized and intoxicated while some of the other common domestic animals do not exhibit the characteristic features at all strikingly or typically. Up to the present time the exact nature of the reaction is entirely unexplained. It seems to concern only protein substances and the amount of protein necessary to sensitize an animal is usually extremely small—one twenty millionth of a gram in the case of egg albumin, and correspondingly small amounts of serum. An animal is said to be sensitized when it has received a single dose of the protein a long enough time previously, at least eight days, so that it will react to a second or intoxicating dose. The condition of sensitization seems to last throughout the life of the sensitized animal, at least in the case of the guinea pig and it is transmitted to the offspring of sensitized females.

We do not know to just what extent we can apply the results obtained by animal experimentation on this subject to the human being. It is certain that occasionally a person has been violently intoxicated by an injection of antitoxic serum, the symptoms being identical with those observed in sensitized guinea-pigs, and so we feel justified in assuming that man may become sensitized to horse serum. However, while some of the human cases of acute intoxication with foreign serum have occurred in patients who had been apparently sensitized by a previous injection of antitoxin, yet in not a few the poisonous injection was the only injection of serum the patient had ever received. It has been frequently recorded in these cases that the patient was afflicted previously with asthma, especially with "horse asthma," in which the attacks follow contact with or proximity to horses; while in some cases the patients have had an idiosyncrasy to eggs or to some other protein food, although many of the patients gave no history of any such conditions. These cases suggest that certain persons may become sensitized to foreign proteins by some other means than injection, and possibly they are congenitally susceptible. In any case, one should always seek to ascertain before injecting serum for therapeutic purposes, whether the patient has any such idiosyncrasy as is mentioned above, and if so to avoid the use of serum if possible, or, when unavoidable, to exercise the precautions mentioned below.

As to the sensitization of man to serum by therapeutic injections our information is confusing. Serum has been injected twice into the same person at intervals of eight days and over in many thousands of cases, either without any evidence whatever of any condition of sensitization, or at the most with local reaction or rashes of various degrees of intensity. This fact may be considered as evidence that man is not readily sensitized to foreign serum, or it may be that the rate of absorption of serum injected subcutaneously is so slow that serious intoxication is not likely to follow. In this case we can imagine that serious results only follow when the second dose of antitoxin is inadvertently injected into a blood vessel in a person who has been previously sensitized or who is naturally sensitive to foreign proteins. In view of the enormous number of cases in which patients have received a second dose of antitoxic serum without harm, it would not seem that antitoxin should be withheld on this account in cases in which it is urgently needed, although one should avoid unnecessary prophylactic injections or the use of sera of doubtful utility (antistreptococcus serum, etc.) When serum must be given to a person whom there is reason to believe has been sensitized, the following precautions might be taken. A single small dose, say half a cubic centimeter, should precede the main injection by one or two hours or more—it is probable that such a dose would not often be seriously intoxicating by the subcutaneous route, and after recovering from the effects of the second dose the individual is refractory to a third dose. Also great care should be exercised to prevent injection of serum into the blood vessels, by using a glass syringe and aspirating gently before injection—if the point of the needle is in a vessel blood will enter the syringe and another site should be sought.

WORKS ON DIETETICS AND CHEMISTRY OF FOODS

To the Editor:—Will you kindly inform me through your "Queries and Minor Notes" of some good modern works on dietetics and the chemistry of various foods and their influences on metabolism?

Joseph Raye Shuman, Sunnyside, Wash.

Answer.—The following are reliable works on this subject:

Von Noorden, K.: "Metabolism and Practical Medicine," W. T. Keener & Co., Chicago, 1907. Net $16.00.

Wiley, H. W.: "Foods and Their Adulteration," P. Blakiston's Son & Co., Philadelphia, 1907. Net $4.00.

Friedenwald and Ruhräh: "Diet in Health and Disease." W. B. Saunders & Co., Philadelphia. 2d Ed. Net $4.00.

Hutchinson, R.: "Food and Dietetics," Wm. Wood & Co., New York. Net $3.00.

Lusk, G.: "Elements of Nutrition," W. B. Saunders & Co., Philadelphia, 1906. Net $2.50.

Thompson: "Practical Dietetics," D. Appleton & Co., New York, Sub. Net $5.00.

Sections on diet in works on therapeutics may also be consulted.

IMMUNIZATION OF CHILD BEFORE BIRTH

To the Editor:—Four or five years ago I was called to attend a negro woman in confinement. Nothing was said about any members of the family having smallpox, but on my arrival I found five of the children in various stages of the disease and the mother with confluent smallpox. After the birth of the baby it was left in the same bed, nursed whenever it wanted to, and was exposed in every conceivable way to the contagion It was not vaccinated, and there was never even a pimple on it. The mother was in the ninth day of eruption, and though her life was despaired of, she made a good recovery. The baby was evidently immunized, through the mother's blood, prior to birth.

D. L. Wilkinson, Montevallo, Ala.

DRUGS WHICH CAUSE SUBNORMAL TEMPERATURE TO RISE

To the Editor:—Do you know of any (ponderable) drugs that cause temperature to rise when subnormal? If so, which?

M. S. A.

Answer.—Drugs which increase oxidation may cause a rise of temperature to the normal, but above this point physiologic heat regulations would compensate for the increased heat-production unless some cause of fever were present. Atropin in moderate doses raises the temperature. Strychnin, caffein, digitalis, and iodothyrin produce a similar effect.

ACTION OF ACIDS ON CALOMEL, WHEN TAKEN INTERNALLY

To the Editor:—Why are articles containing acids withheld after administration of calomel?

A. M.

Answer.—It is generally supposed that the calomel will be changed into corrosive sublimate under the action of acids. This opinion, however, appears not to rest on any good chemical ground, since the tendency to the formation of corrosive sublimate from calomel when under the action of strong acid at the temperature of the body is practically *nil*, with the exception of oxidizing acids, such as nitric, nitrohydrochloric and hypochlorous.

MEAT OF TUBERCULOUS COWS

To the Editor:—In Massachusetts the flesh of cows, condemned on account of tuberculosis, is allowed to be sold after slaughter provided that the tuberculosis is not generalized; it is claimed that such meat will not transmit the disease. The state authorities submit the meat to inspection by the federal authorities and sell what is not rejected after inspection.

W. P. Coues, Boston.

Answer.—It is generally admitted, we believe, that there is little danger from the flesh of cattle with slight localized tuberculosis, since the danger which exists would be removed by thorough cooking. While it seems proper that such meat might be sold, it is only fair to the consumer that he should know that the meat is that of an animal that has been condemned for tuberculosis.

DATA WANTED ON ATROPIN AS A HEMOSTATIC

To the Editor:—I am collecting material for a paper on atropin as a hemostatic and would be obliged to any of your readers who would send me notes of their experience with this remedy. I am particularly anxious to receive adverse reports, as well as those favoring the remedy.

William F. Waugh.
1424 East Ravenswood Park, Chicago.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending March 6, 1909:

Morris, E. R., major, having been found physically disqualified, retired from active service as a lieut.-colonel, Feb. 26, 1909.

Quinton, W. W., capt., having been found physically disqualified, ordered to his home to await retirement.

Thomason, H. D., capt., granted an extension of 10 days to his leave of absence.

Bartlett, C. J., capt., granted leave of absence for 10 days.

Hanson, L. H., lieut., relieved from duty at Fort Sam Houston, Texas, and ordered to Hot Springs, Ark., for duty at the Army and Navy General Hospital.

Mount, J. R., M. R. C., granted leave of absence for one month, with permission to apply for an extension of one month.

Hadra, F., M. R. C., honorably discharged from the service of the United States.

Patterson, E. W., M. R. C., granted leave of absence for one month.

Dade, W. H., M. R. C., sailing for Philippine service deferred to April 5, 1909.

Griswold, W. C., M. R. C., granted leave of absence for 3 months 15 days.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ending March 6, 1909:

Richardson, R. R., P. A. surg., detached from the *Albany* and ordered home to wait orders.

Stibbens, F. H., asst.-surg., detached from the Naval Hospital, Mare Island, Cal., and ordered to the *Albany*.

Ohnesorg, K., surg., detached from the *New Hampshire* and ordered to the Naval Medical School Hospital, Washington, D. C.

Rennie, W. H., P. A. surg., detached from the *Kentucky* and ordered to the *Illinois*.

Oman, C. M., P. A. surg., detached from the *Illinois* and ordered to the *New Hampshire*.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended March 3, 1909.

McClintic, Thomas B., P. A. surg., relieved from duty in Philippine Islands and directed to return to the United States.

Korn, W. A., P. A. surg., granted one month's leave of absence from March 18, 1909, with permission to go beyond the seas.

Branham, H. M., acting asst.-surg., granted thirty days' leave of absence from Feb. 23, 1909.

Bullard, John T., acting asst.-surg., granted thirty days' leave of absence from March 1, 1909.

Eakins O M, acting asst surg, granted three months' leave of absence from Jan 21, 1909 without pay

Goldthwaite Henry, acting asst surg, granted five days leave of absence from March 8 1909

Parker, Thomas F, acting asst surg granted six months' leave of absence from April 1, 1909 without pay

Townsend F, acting asst surg, granted fourteen days leave of absence from Feb 23 1909

Ward, J LaBruce, acting asst surg, granted five days' leave of absence from March 3 1909

PROMOTIONS

Nydegger, James A, P A surg, commissioned a surgeon, to rank as such from Feb 4 1909

McKeon, Francis H, asst surg commissioned a P A surgeon, to rank as such from Nov 27, 1908

Pettyjohn Joseph asst surg, commissioned a P. A surgeon to rank as such from Oct 20, 1908

Frost, Wade H asst surg commissioned a P A surgeon to rank as such from Feb 3, 1909

Mullan, Eugene H asst surg commissioned a P A surgeon, to rank as such from Feb 2, 1909

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General Public Health and Marine Hospital Service, during the week ended March 5, 1909

SMALLPOX—UNITED STATES

California Los Angeles Feb 6 13, 3 cases
District of Columbia Washington, Feb 13 20, 1 case
Georgia Cobb county, Jan 16 Feb 7, 8 cases; Paulding county, 15 cases
Illinois Danville, Feb 14 21, 1 case, Galesburg, Feb 13 20, 1 case
Indiana Elkhart, Feb 13 20, 1 case; Evansville, 4 cases
Kansas Kansas City, Feb 13 20, 6 cases, Topeka, 9 cases, Wichita, 1 case
Kentucky Covington, Feb 13 20, 1 case, Lexington, 3 cases, Paducah Jan 16 20, 23 cases
Louisiana New Orleans, Feb 13 20, 4 cases
Michigan Grand Rapids, Feb 13 20 1 case, Saginaw, Jan 30 Feb 6 1 case Feb 13 20, 2 cases
Minnesota Minneapolis, Jan 1 31 22 cases
Missouri Kansas City, Feb 13 20 1 case, St Louis, 1 case
Montana Butte Feb 2 16 5 cases
Nebraska Lincoln Jan 1 30 2 cases
North Carolina Wilmington, Mar 1, 3 cases
Ohio Cincinnati Feb 12 19, 16 cases, Dayton, Feb 13 20 1 case
Tennessee Memphis, Jan 30 Feb 13, 55 cases; Nashville, Feb 13 20 6 cases
Texas El Paso, Feb 9 23, 3 cases, San Antonio, Jan 24 31, 15 cases
Washington Spokane, Feb 16 13, 1 case, imported
Wisconsin La Crosse, Feb 13 20, 7 cases, Manitowoc, 1 case

SMALLPOX—FOREIGN

Brazil Bahia, Jan 2 16, 43 cases 2 deaths
British Honduras Stann Creek, Feb 5 11, 1 case, imported
Canada Halifax, Feb 6 13 22 cases
Chile Talcaguano, Jan 23 30, present
Egypt Cairo, Jan 14 21, 62 cases 18 deaths
France Marseilles, Jan 1 31, 1 death
Great Britain Bristol, Jan 30 Feb 6, 7 cases; London 1 case
India Bombay Jan 19 26, 10 deaths, Calcutta, Jan 9 16 117 cases epidemic Madras, Jan 16 22, 1 death
Indo China Saigon, Jan 2 9, 2 cases 1 death
Italy General Jan 31 Feb 7, 9 cases; Naples, Jan 31 Feb 7, 25 cases 5 deaths
Japan Formosa Jan 9 16, 1 case
Batavia Java Jan 2 9, 4 cases 1 death
Manchuria Dalny, Jan 16 23, 1 case
Mexico Acapulco Jan 18 24 4 deaths; Guadalajara, Feb 6 11, 2 deaths Mexico City Dec 26 Jan 2, 24 deaths; Monterey, Feb 7 14 1 death
New Foundland South Coast, Jan 13, present.
Norway Bergen, Jan 23 30, 2 deaths
Peru Lima Jan 21, 5 cases, in lazaretto
Russia Moscow, Jan 23 30, 19 cases 10 deaths; Odessa, Jan 16 23 3 cases St Petersburg, 9 cases 2 deaths
Salvador San Salvador to Feb 6, 3 cases Santa Ana, 40 cases
Spain Madrid Jan 1 31, 14 deaths, Valencia Jan 23 30, 3 cases
Turkey Constantinople, Jan 24 Feb 7, 4 deaths

YELLOW FEVER

Brazil Bahia, Jan 2 16, 32 cases, 8 deaths; Para, Jan 16 30, 4 deaths
Dutch Guiana Paramaribo Jan 1 31, 11 cases, 1 death
Ecuador Guayaquil, Jan 23 30 2 deaths
West Indies Curacao, Jan 8 15 1 case

CHOLERA

India Bombay, Jan 19 26 4 deaths; Calcutta, 15 deaths; Rangoon, 1 death
Russia General, Jan 9 16 217 cases, 59 deaths; St. Petersburg, Jan 16 23, 273 cases, 114 deaths

PLAGUE

Brazil Bahia, Jan 2 9, 2 cases, 1 death; Para, Jan 23 30, 1 case, 1 death
Chile Iquique Jan 26 9, in lazaretto
Ecuador Guayaquil, Jan 23 30, 4 deaths
Egypt General Jan 21 28, 6 cases 2 deaths; Alexandria, 1 case
India Bombay, Jan 19 26, 16 deaths, Calcutta, Jan. 9 16, 18 deaths, Rangoon, 8 deaths
Japan Formosa, Jan 9 23, 21 cases, 49 deaths
Mauritius Nov 1 30, 43 deaths
Peru General, Jan 23 30 57 cases, 24 deaths; Callao, 7 cases, 5 deaths, Lima 4 cases, 3 deaths
Turkey: Bagdad Jan 9 16, 5 cases, 2 deaths

Association News

Announcement of Arrangements Under Way For Transportation to Atlantic City Session

The Committee on Transportation and Place of Session announces that negotiations are in progress for special rates on all railroads to the Sixtieth Annual Session of the American Medical Association, which is to be held in Atlantic City, New Jersey, June 8 to 11, 1909

The negotiations include provisions for such special trains or cars as may be necessary from all parts of the country

Those who contemplate attending the session are therefore requested not to make reservations or promises until the report of the committee is published, which will be in the near future M. L Harris, Chairman.
Committee on Transportation and Place of Session

NEW MEMBERS

List of new members of the American Medical Association for the month of February, 1909:

ALABAMA

Baldwin, B J, Montgomery
Etheredge B T, Town Creek
Goldthwaite Robt Montgomery.
Hairston, W G, Burnt Corn
Harrell, W R, Cates
Huddleston, R L Speigners
Jones, J H, Camden
Langley, W T, Camp Hill.
McMurphy J P, Atmore.
Northen, Thos, Ashland
Sherrill, R B, Hartselle
Solomon, E P, Birmingham.

ARIZONA

Perkey, A B, Morenci
Redewill F H, Phoenix.
Servin, G R, Tucson

ARKANSAS

Altman, G G, Helena
Foster, Marion E, Roseville.
Garrison, C W, Ft Smith
McCarroll, H R, Walnut Ridge.
Robertson, A B, Calmer
Robertson, J A, Hot Springs
Ruff, Horace E, Pitman
Rushing, J L, Chidester

CALIFORNIA

Edmonds, F W, Berkeley.
Goldman, S A, Orland
Hart, A. C, Sacramento
Higgins, I. W, Berkeley
Johnston, J H, Dutch Flat
Kothganger, George, San Francisco
Shannon J W, San Diego
Stafford, D E, San Francisco.
Wintermute, G P, Oakland.

COLORADO

Campbell, Jacob, Boulder
Dale, J E, Fort Collins
McKelvey, S R, Denver.
Milligan, C F, Vilas
Morning J F, Denver
Pitts, W I Bristol
Witter, R V, Fountain

CONNECTICUT

Coburn, J M, So Norwalk
McNeil, Rollin, New Haven
Phillips, F L, Litchfield
Kuickoldt, F. A, New Haven.

DISTRICT OF COLUMBIA

Fisher, R A, Washington
Kaveny J J Washington
Lewis, S E, Washington
Price, M H, Washington.
Vale, F P, Washington

GEORGIA

Little, A G, Valdosta
Sample, R L, Statesboro

ILLINOIS

Becker, P F, Chicago
Bremerman, L W, Chicago.
Carey, J F, Braceville
Crofut, Martha M, Maywood.
Donlon, S E, Chicago
Dunzer, Sophie C, Chicago.
Jampolis Mark, Chicago
Kenton, J R, Raymond
McMillin, H C, Morton
Mueller, A N, Rock Island.
Schmidt, F F, Chicago
Peterson, E F., Varna.

INDIANA

Loyd H B, Cambridge City
Eckhart G G, Marion
Holloway, Emma G, North Manchester.
Hulbush, W A, Ft Wayne
McCown, P E, Indianapolis
Bodenbeck, Frank, Arcadia
Saunders J E, Balbec
Schuck, J H, Chandler
Souder, E G, Auburn
Walters, L O, Chrisney
Wilson, T W, New Harmony.
Young, F J, Leesburg

IOWA

Beam, H A, Bradgate
Bice, D C, Des Moines
Carhart, W. G, Marion
Coakley, G C, Creston
Cowan, Isabel E, Rodney.
Fordyce, W E, Oelwein
Henry, Rex V, Hedrick
Hess, W C, Cresco
James, L D, Fairfield
Meents, D J, West Point
Murphy, J J, Cedar Rapids
Parker, E S, Ida Grove
Sells, B B Independence
Somers, Pearl E Grinnell
Van Derveer, F L, Cedar Falls.
Ware, W F., Moulton

KANSAS

Haynes, E E, Lewis
Heylmun, H. H, Hutchinson
Jones, W M, Hutchinson
Pearson, P A, Kinsley.
Scott, T P, Topeka
Smith, E O, Marquette.

KENTUCKY

Combs, J. W, Daisy
Doole, T P, Louisville
McKinley, D H, Winchester.
Pendley, J W, Paducah
Shively, O H Greensburg.
Spaulding, J R, Lebanon.
Taylor, J H, *Providence*
Weinberg, S, Louisville
Young, L E, Paducah

LOUISIANA

Cohn, Isadore, New Orleans
Estopinal, J A, New Orleans
Landry, J E New Orleans
Perkins, A J, Lake Charles
Sistrunk, W. E, Lake Charles

MAINE

Tyson, F. C, Bangor.

MARYLAND

Bergland, J M, Baltimore.
Blake, H C, Baltimore
Carroll, A. H, Baltimore
Fenby, E B, Baltimore
Henderson, F. N, Rockville.
Herrmann, F H, Baltimore.
Lumpkin, J C, Baltimore
McDevitt, E P, Baltimore.
Sterling E B., Baltimore
Wanstall, Alfred, Baltimore.

MASSACHUSETTS

King, N C, Brockton
Still, C W, Roxbury
Stoodley, H M, Somerville.

MICHIGAN

Ardiel, L. M., Avoca.
Culver, B. W., Coldwater.
McNaughton, D. D., Argyle.
Millis, E. D., Webberville.
Raynale, G. P., Harbor Beach.
Stewart, F. W., Coldwater.
Turner, S. R., Bronson.
Wood, D. H., Coldwater.
Young, G. F., South Haven.

MINNESOTA

Andrews, R. N., Mankato.
Barclay, Alexander, Cloquet.
Brubaker, E. E., Northfield.
Friesleben, William, Sauk Rapids.
Salter, W. H., Duluth.
Smith, A. E., Minneapolis.

MISSISSIPPI

Wait, H. C., Etta.

MISSOURI

Bassett, S. T., St. Louis.
Glennon, W. P., St. Louis.
Kern, J. H., St. Louis.
Lee, Herbert, St. Joseph.
Lund, H. G., St. Louis.
Schery, C. W., St. Louis.
Woodruff, F. E., St. Louis.

NEBRASKA

Anderson, D. F., Edgar.

NEW HAMPSHIRE

Crossman, E. O., Portsmouth.
Fowler, F. A., Hill.

NEW JERSEY

Clock, R. O., Burlington.
Martine, F. L., Newark.
Miningham, W. D., Newark.
Nay, C. L., Jersey City.
Porteous, E. J., Atlantic City.

NEW YORK

Alexander, L. D., Jr., New York.
Antonius, Emma H. H., Brooklyn.
Barker, P. M., New York.
Beach, R. M., Brooklyn.
Block, Siegfried, Brooklyn.
Brader, W. B., Brooklyn.
Burns, Robt., Syracuse.
Chace, A. E., Tarrytown.
Cole, C. G., Binghamton.
Cone, R. S., Brooklyn.
Cohn, Wm., New York.
Craig, T. L., Davenport.
Demong, C. W., Syracuse.
Devlin, R. J., New York.
Durham, Roger, Brooklyn.
Fries, Wm. A., Brooklyn.
Goss, Alfred, Adams.
Green, E. E., Brooklyn.
Hacker, C. G., Albany.
Hacker, C. W. L., Albany.
Hall, W. P., Frankfort.
Harrar, J. A., New York.
Harrig, P. W., Albany.
Harris, H. G., New York.
Hincher, C. L., Rochester.
Horner, R. N. W. R., Watkins.
Howser, F. P., Otisville.
Hull, E. T., New York.
Hulst, F. A., Brooklyn.
Hussey, A. A., Brooklyn.
Isaacs, H. E., New York.
Jenkins, J. A., Brooklyn.
Kalisher, Joseph, New York.
Kilbourn, J. G., Utica.
Killip, T. A., Rochester.
Kimball, P. W., New York.
Lane, C. E., Poughkeepsie.
Lawler, A. J., Niagara Falls.
MacRae, Thos., New York.
McGuire, E. R., Buffalo.
McMenamen, F. J., Highland Falls.
Meyer, Joseph, Brooklyn.
Mittendorf, A. D., New York.
Murphy, E. J., Brooklyn.
Newell, E. S., Pelham.
Noonan, C. J., Brooklyn.
Ochs, B. F., New York.
Ormiston, Wm., Delhi.
Rae, J. B., New York.
Rappold, J. C., Brooklyn.
Rehberger, C. E., Sonyea.
Robinsohn, David, New York.
Roper, J. C., New York.
Schmitt, A. E., Riverdale-on-Hudson.
Schoen, Adolph, New York.
Simmons, W. S., Jr., Brooklyn.
Spence, D. B., New York.
Spiller, W. H., New York.
Stafford, A. E., Whitesboro.
Sweetland, Frank, Angola.
Thompson, E. B., New York.
Van Campen, Benj., Olean.
Waechter, A. L., New York.
Ward, E. H. P., New York.
Ward, Wilbur, New York.
Warner, C. B., Port Henry.
Weil, Richard, New York.
Wenner, George, New York.
Wilkinson, E. C., New York.

NORTH CAROLINA

Foscue, J. E., Jamestown.
Frazer, Thompson, Asheville.

NORTH DAKOTA

Hattendorf, Jessie, Jamestown.
Lyman, F. V., Thompson.
Sandven, N. O., Park River.

OHIO

Childs, L. W., Cleveland.
Kinnicutt, W. H., Cleveland.
Rieg, P. S., Toledo.
Swinehart, M. E., Lockbourne.
Thompson, J. D., Granville.
Tuechter, J. L., Cincinnati.

OKLAHOMA

Cavett, E. R., Kiel.
Croston, G. C., Sapulpa.
Rammel, W. E., Bartlesville.
Runyan, J. R., Ada.

OREGON

Baker, J. A., Gaston.
Clay, H. E., Salem.
Coghlan, J. N., Portland.

PENNSYLVANIA

Baaleth, G. R., Pittsburg.
Brinham, A. W., Scalp Level.
Brophy, J. A., Philadelphia.
Carruthers, G. H., Philadelphia.
Ferguson, W. N., Philadelphia.
Frankel, J. J., Philadelphia.
Hildrip, J. W., Philadelphia.
Holliday, G. A., Pittsburg.
Johnston, R. C., Springdale.
Leidy, C. F. M., Philadelphia.
McKinley, A. L., Philadelphia.
McLernon, John, Philadelphia.
Miller, D. I., Harrisburg.
Milligan, S. C., Pittsburg.
Parks, C. C., Leechburg.
Repplier, S. J., Philadelphia.
Richards, D. B., Philadelphia.
Schetky, S. Elizabeth A., Philadelphia.
Simpson, J. R., Pittsburg.
Smith, J. D., Freedom.
Stout, E. J., Philadelphia.
Target, J. D., Philadelphia.
Tillman, W. G., Easton.
Walker, J. T., Philadelphia.
Yeager, F. N., Philadelphia.

RHODE ISLAND

Anderson, A. J., Newport.
Archambault, J. B., Woonsocket.

SOUTH CAROLINA

Valley, J. L., Pickens.

TENNESSEE

Abernathy, Shields, Pulaski.
Enochs, W. N., Huntingdon.
Henderson, P. L., Morristown.
Parker, W. B., Smithville.
Pettey, G. E., Memphis.

TEXAS

Alexander, C. E., Pollok.
Brannon, H. O., Ft. Worth.
Delany, G. E., Galveston.
Hartman, Henry, Galveston.
Heard, A. G., Galveston.
Hearn, R. E., Mabank.
Hicks, J. H., Josephine.
Hume, Lea, Eagle Pass.
Kennedy, T. L., Galveston.
King, W. A., San Antonio.
Kleberg, Walter, Galveston.
McFarland, V. E., Eagle Pass.
Oxford, J. W., Austin.
Parker, G. D., Houston.
Pritchett, Ira E., Galveston.
Richmond, J. M., El Paso.
Ross, H. B., Del Rio.
Rumph, E. P., Lawn.
Scott, R. M., Del Rio.
Shipp, W. J., New Salem.
Shropshire, L. L., San Antonio.
Springer, J. G., San Antonio.
Taliaferro, W. F., Beaumont.
Thomson, W. F., Beaumont.
Warfield, Clarence, San Antonio.
Watson, Wm., Uvalde.
Williams, W. T., Beaumont.

UTAH

Merrill, H. G., Provo.

VIRGINIA

Baggarly, C. M., Richmond.
Busey, C. E., Lynchburg
Meade, J. O., Fugates Hill.
Morrison, James, Lynchburg.
Stone, H. B., Charlottesville.
Walker, L. D., Spout Spring.
West, W. J., Richmond.

WASHINGTON

Black, F. A., Seattle.
Doland, C. M., Spokane.
Kuykendall, G. B., Pomeroy.
Morrison, J. R., Bellingham.
Rinkenberger, F. W., Tacoma.
Taggart, E. J., Bremerton.

WEST VIRGINIA

Davis, G. H., Chester.
Staatz, O. M., Wheeling.
Stahl, E. J., Charleston.
Warder, J. I., Weston.

WISCONSIN

Allen, C. F., Middleton.
Bickford, H. G., Hudson.
Keithley, J. A., Palmyra.
O'Connell, D. C., Menasha.
Pope, F. W., Racine.
Ryan, C. E., Appleton, Wis.
Sorenson, Soren, Racine.
Westgate, F. J. E., Manitowoc.

WYOMING

Croft, E. W., Cowley.

Marriages

Joseph J. Mahady, M.D., to Miss Nellie Nulty, both of Adams, Mass., recently.

Edmund Myers, M.D., Boston, to Miss Stella Hayman of Philadelphia, February 23.

Albert Sumner Bacon, M.D., to Miss Lottie Gilbert Tift, both of Albany, Ga., February 16.

F. J. Freshley, M.D., Plainville, Ind., to Miss Bessie P. May of Newtonville, Ind., February 3.

Lorne A. Campbell, M.D., Clear Lake, Wis., to Miss Letitia A. Lee of Grand Forks, N. D., January 1.

Sadie Monahan, M.D., Wellston, Ohio, and G. W. Whitt of Oklahoma City, at Dayton, Ohio, recently.

Wilmer G. Lockard, M.D., New Castle, Colo., to Miss Harriette Winoms of Albany, Ill., February 10.

Daniel L. McCormick, M.D., Newark, N. J., to Miss Sarah A. Convery, of Trenton, N. J., February 17.

Oliver Chambers, M.D., Rock Springs, Wyo., to Miss Mabel Elizabeth Bosworth of Denver, Dec. 30, 1908.

Brent C. Tarbell, M.D., Naco, Ariz., to Miss Ora E. Force of Kansas City, Mo., at El Paso, Texas, February 23.

V. Joseph Blanchette, M.D., Walkerville, Mich., to Miss Catherine A. Otterbein of Grand Rapids, Mich., February 22.

Deaths

Robert Alexander Murray, M.D. New York University, New York City, 1873; a member of the American Medical Association, American Gynecological Society and New York Academy of Medicine; fellow and ex-president of the New York Obstetrical Society; president of the New York Society of Medical Jurisprudence; formerly adjunct professor of obstetrics in New York University; obstetric surgeon to the Maternity Hospital, Blackwell's Island; surgeon to the Workhouse and Almshouse; consulting gynecologist to the French Hospital; and associate surgeon to the Woman's Hospital; died at his home in New York City, February 27. from pneumonia, aged 57.

Thomas Cameron Walton, M.D. New York University, New York City, 1862; who was appointed to the naval medical corps Oct. 5, 1861; served during the Civil War, and was retired at the age of 62 as medical director, May 31, 1900, after fourteen years and ten months of sea service, and twenty-one years and eleven months of shore and other duty, during which he was twice senior medical officer at the U. S. Naval Academy, Annapolis, and once fleet surgeon of the flying squadron; a member of the American Medical Association and of the French Society of Hygiene; died suddenly from cerebral hemorrhage, at his home in Annapolis, March 2, aged 70.

Leo J. Weinstein, M.D. Miami Medical College, Cincinnati, 1874; of Terre Haute, Ind.; a member of the Indiana State Medical Association, and formerly president of the Vigo County Medical Society; a gynecologist of local repute, founder of the Union Hospital; a member of the city and county councils for two terms; and secretary of the city and county boards of health; died in the Union Hospital, February 17, aged 60. The Vigo County Medical Society, at a special meeting, adopted resolutions paying tribute to his memory and extending sympathy to his bereaved family.

Edmund George Waters, M.D. University of Maryland, Baltimore, 1853; of Baltimore; some-time representative in the legislature from Dorchester county; from 1862-1865 acting assistant surgeon U. S. Army; professor of natural science in the Baltimore City College from 1866 to 1868; one of the founders of the Medical and Surgical Society of Baltimore in 1863; and a founder and president of the Baltimore Medical Association; died February 19, in the Union Protestant Hospital, Baltimore, from nephritis, aged 78.

Samuel Johnson Call, M.D. Cooper Medical College, San Francisco, 1884; surgeon in the U. S. Revenue Cutter Service, serving chiefly in Arctic waters for many years; surgeon of the relief party which rescued the imprisoned whalers at Point Barrow, Alaska, in February, 1898, and voted a gold medal by Congress for this service; died at his home in Hollister, Cal., from nephritis, February 16, aged 51.

Chauncey Harmon Smith, M.D. Jefferson Medical College, Philadelphia, 1871; formerly a member of the American Medical Association and Austin Flint-Cedar Valley Medical Society; local surgeon for the Chicago, Milwaukee and St. Paul Railway; and a prominent practitioner of that section of Iowa; died at the home of his daughter in Mason City, February 25, aged 71.

Isaac R. Swigart, M.D. Cincinnati College of Medicine and Surgery, 1877; formerly of Laramie; secretary and editor of the Wyoming State Medical Society, and a member of the Rocky Mountain Inter-State Medical Society; assistant surgeon for the Colorado Fuel and Iron Company; died at his home in Leslie, Wyo., February 19, from locomotor ataxia, aged 61.

William Wilburn Lunn, M.D. Tulane University, New Orleans, 1884; formerly president of the Fayette County (Texas) Medical Association; chief surgeon of the Lunn Sanitarium, and the Texas Christian Sanitarium, Houston; died in the Lunn Sanitarium, February 24, from septicemia, due to an operation wound, aged 62.

Wilbur Hall Seymour, M.D. Long Island College Hospital, Brooklyn, 1892; assistant in pathology in his alma mater; pathologist to the Bushwick Hospital, and Sheltering Arms Nursery, and assistant pathologist to King's County and Long Island College hospitals; died at his home in Brooklyn, February 28, from pneumonia, aged 40.

James W. Moore, M.D. University of Pennsylvania, Philadelphia, 1869; a member of the Medical Society of the State of Pennsylvania; professor of mechanics and experimental philosophy in Lafayette College, Easton, since 1872; died at his home in that city, February 28, from septicemia due to an ulcerated tooth, aged 64.

Henry J. Brooks, M.D. Northwestern University, Chicago, 1874; Long Island Hospital College, Brooklyn, 1874; from 1874 to 1877 assistant physician, and from 1890 to 1893 superintendent of the Illinois Northern Hospital for the Insane, Elgin; died at his home in Dixon, February 25, from cerebral hemorrhage, aged 59.

Frank Jackson MacNett, M.D. Bellevue Hospital Medical College, New York City, 1898; a member of the American Medical Association; a specialist on diseases of the eye, ear, nose and throat, and a special pension examining surgeon, died at his home in Traverse City, Mich., February 28, from pneumonia, aged 37.

John H. W. G. Weedon, M.D. University of Maryland, Baltimore, 1864; of Church Hill, Md.; formerly a member of the Medical and Chirurgical Faculty of Maryland and a member of the legislature from Queen Anne county; died in the University Hospital, Baltimore, February 17, from nephritis, aged 74.

Isaac A. Thompson, M.D. Trinity Medical College, Toronto, 1883; of Grand Rapids; a member of the Michigan State Medical Society; formerly health officer of Traverse City, and local surgeon for the Grand Rapids and Indiana Railroad; died at St. Mary's Hospital, Grand Rapids, February 25, aged 49.

Charles Lince Coulter, M.D. University of the Victoria College, Coburg, Ont., 1869; formerly government inspector of medical supplies for the Dominion of Canada; and chief surgeon of the Grand Trunk Railroad; died at his home in Philadelphia, February 22, from pneumonia, aged 69.

Horatio Ripley Bigelow, M.D. George Washington University, Washington, D. C., 1879; formerly of Boston; who held at one time a government appointment at Berlin, and later was United States consul at Rouen, France; died at his home in Washington, February 20, aged 65.

John B. Bass, M.D. Washington University, Baltimore, 1870; a member of the American Medical Association and of the board of U. S. pensioning examining surgeons of St. Clair county, Ala.; a Confederate veteran; died at his home in Ashville, February 21, aged 64.

Joseph S. Maxon, M.D. Hahnemann Medical College, Chicago, 1875; Chicago Homeopathic Medical College, 1879; a member of the Wisconsin legislature in 1890 and 1891; coroner of McHenry county, Ill.; died at his home in Harvard, February 28, from influenza, aged 70.

Harry C. Long, M.D. Western Reserve University, Cleveland, 1891; for many years house physician of hotels in Cleveland; and for the last nine years physician at the Hollenden; died in the Flagler Hospital, St. Augustine, Fla., February 23, from nephritis, aged 40.

Ah Sam Lang (license, Kan., 1901); of Leavenworth, Kan.; said to have been a graduate of a medical college in Canton, China, in 1882; died in St. John's Hospital, Leavenworth, February 18, from the effects of poisoning by cannabis indica and gas.

Edwin D. Wiley, M.D. Bennett Medical College, Chicago, 1870; of Des Moines, Iowa; a member of the American Medical Association; died suddenly while making a professional call in South Des Moines, February 28, from heart disease, aged 52.

Daniel E. Barger, M.D. New York University, New York City, 1877; formerly health officer of San Francisco; and later superintendent of the City and County Hospital; a Confederate veteran; died recently and was buried February 18, aged 72.

William J. Ballentine, M.D. Medical College of South Carolina, Charleston, 1857; formerly of Brewerton and Princeton, S. C.; a Confederate veteran; died at the home of his son in Ware Shoals, S. C., February 14, from senile debility, aged 80.

Ambrose Brown, M.D. Ohio Wesleyan University, Cleveland, 1865; for many years a practitioner of Grand Ledge, Mich.; a veteran of the Civil War; died at his home in Lansing, Mich., February 24, from cardiac dropsy, aged 68.

William F. Chenault, M.D. University of Maryland, Baltimore, 1888; a member of the Medical Society of the State of North Carolina; died at his home in Cleveland, N. C., February 24, from cerebral hemorrhage, aged 46.

James F. Grimes (license, Ind., 1897); for fifty-six years a practitioner of northern Indiana; the oldest member of the Physicians' Club of Mishawaka, Ind.; died at the home of his daughter in that place, February 26, aged 85.

Jesse Reynolds, M.D. Castleton (Vt.) Medical College, 1847; formerly a member of the American Medical Association; a trustee of the Normal school board; died at his home in Potsdam, N. Y., February 19, aged 85.

Hubbard Hammond Brigham, M.D. Worcester (Mass.) Medical College, 1855; the oldest practitioner of Fitchburg, Mass.; died at the home of his son in Brigham Park, Fitchburg, February 20, from senile debility, aged 91.

Hebron D. Kelly, M.D. Medical College of the State of South Carolina, Charleston, 1895; a member of the Medical Association of the State of Alabama; died at his home in Bellwood, February 23, aged 38.

Virgil H. Grimsley, M.D. Memphis (Tenn.) Hospital Medical College, 1895; of the Mount Carmel neighborhood, near Covington, Tenn.; died in a hospital in Nashville, February 18, from pneumonia, aged about 35.

Marshall Surenson, M.D. Rush Medical College, Chicago, 1894; of Viroqua, Wis.; a member of the State Medical Society of Wisconsin; died in La Crosse, Dec. 25, 1908, from appendicitis, aged 35.

John Dabney Palmer, M.D. University of Louisville, Ky., 1866; for many years president of the Florida State Board of Pharmacy; died at his home in Monticello, February 21, from pneumonia, aged 68.

Wesley McGuffin, M.D. Western University, London, Ont., 1892; of Battle Creek, Mich.; a member of the Michigan State Medical Society; died in Phoenix, Ariz., March 1, from tuberculosis, aged 42.

William Nisbet, M.D. University of Würzburg, Germany, 1849; a charter member of the Livingston County (N. Y.) Medical Association; died at his home in Avon, February 26, aged 83.

George Frechette, M.D. Laval University, Quebec, 1877; a member of the medical staff of Notre Dame Hospital, Manchester, N. H.; died in that institution February 18, aged 59.

Charles I. Farley, M.D. University of Vermont, Burlington, 1859; assistant surgeon in the army during the Civil War; died at his home in Glens Falls, N. Y., February 22, aged 77.

Cotton C. Bradbury (license, Colo., 1882); for more than fifty years a practitioner; founder of the town of Evans, Colo.; died at his home in Denver, February 17, aged 86.

Carl Nelson Brandt, M.D. College of Physicians and Surgeons, New York City, 1883; of Hot Springs, Va.; died in Tarrytown, N. Y., February 27, aged 46.

James Augustus Pratt, M.D. Barnes Medical College, St. Louis, 1893; died at his home in Brookfield, Mo., Dec. 17, 1908, from cirrhosis of the liver, aged 53.

John A. Schulte, M.D. Washington University, Baltimore, 1875; of East Baltimore; died at the home of his brother in Baltimore, February 20, aged 56.

Henry Miller Downing, M.D. University of Pennsylvania, Philadelphia, 1886; died at his home in Sugartown, Pa., from pneumonia, January 21, aged 47.

Theodore Vanhensen Law, M.D. University of the Victoria College, Coburg, Ont., 1872; died at his home in Dearborn, Mich., February 24, aged 66.

Jessie C. Dickerson, M.D. Cleveland Homeopathic Medical College, 1898; died at her home in Muskogee, Okla., March 2, from tuberculosis, aged 29.

Hugo Schaeffer, M.D. University of Tübingen, Germany, 1865; died suddenly from heart disease at his home in Belleville, Ill., February 22.

David L. Trowbridge (license, Ind., 1905); for forty-two years a practitioner of Indiana; died at his home in Muncie, February 22, aged 75.

William L. MacBeth, M.D. Physio-Eclectic Medical College, Cincinnati, 1878; died at his home in Galesburg, Mich., February 17, aged 67.

William F. G. Wilson, M.D. Apothecaries' Medical College, England, 1866; died at his home in Armathwaite, Tenn., February 14, aged 65.

Stepney Brown Hill, M.D. Leonard School of Medicine, Raleigh, N. C., 1888; died at his home in Lynchburg, Va., February 15, aged 50.

Benjamin F. Northrip (license, Mo., 1890); of Springfield, Mo.; died in Stoutland, Mo., February 15, from pneumonia, aged 54.

Austin S. Bronson, M.D. Detroit College of Medicine, 1869; died at his home in New Hampton, N. H., Dec. 30, 1908, aged 65.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Lodge Practice in England

The *British Medical Journal*, February 13, publishes, in its supplement, an extended report of a conference called by the Council of the Charity Organization Society between representatives of the "friendly societies" and members of the medical profession. Friendly societies in England are similar to the benevolent and fraternal organizations of this country. For many years past one of the chief advantages offered members of such societies has been medical attendance for themselves and members of their family, services being furnished by the "lodge doctor" or "society physician." Multiplication of societies, with resulting rivalry, competition among physicians for such appointments and the necessity of reducing society operating expenses to the lowest possible point have all combined to reduce the compensation paid for medical services by most of these societies to an absurdly small amount, to which, however, the present holders of the positions cling, knowing that if they resign other men stand ready to take their places. The abuses and injustices of the system have been growing and it was in hopes of reaching an equitable solution of the problem that the conference was held. Six members of the British Medical Association nominated by the council, on recommendation of the medico-political committee, as well as representatives of divisions of the association from different parts of England were present. Representatives of the English Order of Foresters, Odd Fellows and Hearts of Oak (the latter a fraternal organization having a large membership in England) were among those present from the friendly societies. The principal paper on the subject was by Dr. Thomas Pearse in which he reviewed a protracted experience in lodge practice, saying that after twenty years of discussion the question is still unsettled. He asked the representatives of friendly societies to consider seriously whether the complaints of medical men were justified and whether anything could be done to remedy them. The profession had no quarrel with friendly societies as such. The good work they had done was patent to all; neither did the profession object to friendly societies providing medical attendance for their members in time of sickness. It only demanded that arrangements for such medical attendance should be equitable. Physicians maintained that the methods used were neither fair nor reasonable. Reviewing the facts in the light of a large mass of statistics, he showed that in 1,641 clubs, 76.5 per cent. paid less than five shillings—$1.25—while 23.5 per cent. paid more than this amount per member, annually. For this sum, the physician must attend members who are ill and must also provide necessary drugs and surgical dressing. As to the amount of work done, the annual reports of the Manchester Unity of Odd Fellows, comprising over 600.000 members, engaged in all varieties of occupation, showed that in the five years from 1893 to 1897 there had been an annual average period of sickness per member of 2.344 weeks. Consequently, a lodge of 100 members, about an average number, would experience during each year 234 weeks of sickness, for attendance on which the society physician would receive £25, or about $125. This would be equivalent to attending one man continuously for 234 weeks, or four years and six and a half months for $125. This amounts to about fifty-three cents a week, or on the basis of one call daily to about seven and a half cents a call, including cost of surgical dressing, etc. These figures are particularly interesting in view of the argument frequently made by lodges that the physician receives so much *per capita* from the well member as well as from the sick one and consequently can afford to attend those who are ill at a very low *per capita* rate. Dr. Pearse concludes that such remuneration is utterly unjust to a man who has spent years and means in obtaining the knowledge necessary to a performance of his work and that it is not likely to encourage him to discharge such duties efficiently and earnestly. Dr. Pearse also pointed out that the amount of the payment made by members to the fraternal societies for sick benefits has been very accurately determined, after long and careful actuarial investigation and calculation, while no such attempt has ever been made to determine the proper basis for compensation for physicians, the result being that compensation for medical services is purely guesswork rather than scientific calculation.

Another injustice is that members joining a fraternal organization in early life and when their income is limited to their wages, often becoming well-to-do in later life and abundantly able to pay the usual fees for medical services but that by maintaining their membership they are able to secure medical services at a rate entirely out of proportion to their ability to pay. An illustration of this point which he cites is a case reported in the *Lancet*, of the principal manufacturer of a certain district who paid his employés $3,000 a week in wages, who was wealthy enough to keep a stable of horses for hunting, and who, on his death, left over $50,000, and yet was attended in his last illness by a lodge doctor who received only four shillings a year for his services to this man. Another member attended by the society physician at the same rate left on his death over $400,000. Dr. Pearse held that a wage limit should be instituted in fraternal organizations and that no member earning or receiving an income over a certain amount should be entitled to the services of the lodge physician. He said that the problem was too difficult for one man to solve, that it should be approached in the light of reasonable endeavor and an honest effort made to arrive at a mutually satisfactory agreement. The real interests of the medical profession and of the friendly societies were identical. Unless some radical improvement took place, however, self-respecting physicians would be compelled to refuse to have anything to do with fraternal organizations, which bodies would, in consequence, be restricted in their choice of physicians to incompetent or poorly trained men with a resulting reduction of the value of the services rendered their members. Not only are the present conditions unendurable from a financial point of view but many a man who began his work with enthusiasm has found his professional life embittered by the evils of the contract system which blighted his hopes, blighted his ambitions and destroyed his love of work.

Sir James Barlow, after discussing the large amount of unremunerated charitable work done by physicians and pointing out the injustice of the present situation, said that one of the most striking things that had happened in this generation was the improvement in the status of the working man. It is now admitted that a man who does his work deserves to have a living wage so as to be able to maintain himself and his family decently, to bring them up properly, and to get some little compensation for old age. He appealed to the representatives of the benevolent organizations to consider the work and remuneration of the physician from this point of view. A physician who did his work well deserved a living income so as to be able to bring up his family properly and educate them and also to put aside a little money for old age. He was also entitled to a little time for rest, quiet and leisure, as well as to an opportunity to keep himself abreast of the advance in medicine and surgery so that his patrons, whether they be individual or societies, could have the advantage of it. Could a medical man earn a living wage if he did nothing but club work? Was it possible for him to make a living and have any leisure? After reviewing the constant demands of a physician's life, he asked the representatives of the fraternal societies to consider the condition of the average physician, the number of hours a day which he worked, the amount of time for rest and recreation and leisure which he had and the compensation which he received. All were agreed that a friendly society was a good thing; that the principle of insurance was a good thing, and that it was the only way in which people with limited means could pay for their medical attendance.

The representatives of the friendly societies presented the matter from their point of view, maintaining that the inequity referred to was not general, but only occasional, and that in the main the treatment accorded physicians was fair. None of the representatives of fraternal societies who spoke presented any figures or data regarding number of cases or duration of illness by which their claims could be substantiated. Dr. Smith Whittaker, medical secretary of the British Medical Association, discussed previous attempts at solving this problem and said that the difficulty in the past had been that the medical profession was not sufficiently organized for any representatives to negotiate an agreement with the same authority which the friendly societies could negotiate. There were grievances on both sides but what the medical men felt most strongly was that a form of contract between the practitioner and his patients originally, enacted for a particular class and accepted by the physician for reasons applicable only to that class, had been greatly extended to people of other classes. The medical profession held that an agreement with the friendly society was a free contract and that physicians had a right to say what people they were willing to attend under such a contract. Physicians only desired pay for work that was actually done but they did desire adequate compensation for work which was properly performed. One speaker had suggested that the practice of medicine should become a state service. The question arose whether the medical profession was not at present being depleted by the large number of men of scientific tastes who were going into other lines of work. In some districts this was becoming a very serious question, since physicians were getting so discontented that men of good standing could not be obtained to supply the demand.

The above is a brief summary of a discussion covering many pages and of much interest as showing the economic and social conditions under which many members of the medical profession in Great Britain live. As previously pointed out in THE JOURNAL[1] this question is one of vital interest to American physicians. There is no reason why the physician should be exploited for the benefit of the middleman, whether that middleman is an individual or an organization. The ultimate outcome of lodge practice, as shown by this discussion, should be carefully considered by physicians in the United States. The physician, like any other professional man, should receive definite pay for definite services, rather than a fixed sum for an indefinite amount of work. American laboring men receive far better wages and live under better conditions than the English workingmen and can well afford to pay a reasonable price for competent medical services for themselves and their families. They should not ask or expect the physician to agree to work for them in violation of the very principles for which the workingman himself has contended for years. Any further development or spread of lodge or society practice in the United States should be vigorously opposed by county societies as well as by individual physicians.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Eighth Month—Second Weekly Meeting

DIFFUSE AND FOCAL DISEASES OF THE SPINAL CORD

HEMATORRHACHIS.—(a) Extra-meningeal, (b) intra-meningeal: due to traumatism, infections, convulsions, aneurism of base of brain, fracture of base, after meningitis. Symptomatology.

HEMATOMYELIA.—Etiology: Age, sex, trauma, exposure, convulsions, vascular degeneration, constitutional diseases. Pathology: Position in cord, vessels involved, extent, structures involved. Symptoms: Onset, paralyses, esthesiæ, pains, difference between two sides, course, terminations.

CAISSON DISEASES.—Etiology, pathologic findings, symptoms, treatment.

COMPRESSION MYELITIS.—Etiology: Spinal caries, tumors, aneurism, parasites, trauma. Symptoms: (1) Bone (vertebral) symptoms, deformity, tenderness, pain. (2) Nerve-root symptoms, intensity, pains, anesthesia, muscular atrophy, trophic changes. (3) Cord symptoms: (a) cervical, (b) dorsal, (c) lumbar.

LESIONS OF CAUDA EQUINA AND CONUS MEDULLARIS.—Etiology and diagnosis.

TUMORS OF CORD AND MEMBRANES.—Situation, extra- or intradural, level of cord. Tubercle, gumma, primary benign and malignant tumors, secondary invasion of extraspinal tumors. Symptoms: Radiating pains, segmental atrophy, paralysis, crossed sensory and paretic symptoms, slow progress of case. Differential diagnosis.

SYRINGOMYELIA.—Etiology and pathology: Age, sex, occupation, trauma; extent and site of cavity, structure of new growth. Symptoms: Pain, site and character; muscular atrophy, reflexes, paralyses, esthesiæ, trophic disorders. Diagnosis: Varying types.

ACUTE MYELITIS.—Etiology: Exposure, acute infections, traumatism, disease of spine, disease of cord. Symptoms: (1) Acute diffuse myelitis; premonitory symptoms, onset, pain, constitutional disturbances, paralyses, esthesiæ, reflexes, sphincters, trophic disorders, course and terminations. (2) Acute transverse myelitis; (a) dorsal region, onset, pains, paralyses, esthesiæ, reflexes, sphincters, electrical changes, trophic changes, course. (b) Cervical region, difference in symptoms from dorsal, vomiting, bradycardia, hiccough, pupillary changes.

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[1] Jour. A. M. A., Dec. 14, 1907, p. 2028.

Book Notices

EXPERIMENTAL RESEARCHES ON SPECIFIC THERAPEUTICS. By Paul Ehrlich, M.D., D.Sc., Director of the königlisches Institut für experimentelle Therapie, Frankfort. The Harben Lectures for 1907 of the Royal Institute of Public Health. Cloth. Pp. 95. Price, $1.00. New York: Paul B. Hoeber, 1909.

Perhaps the highest enconium that can be pronounced on the work of Ehrlich is that he has carried his deductions from the field of theory into that of practical results and seems to have approached very near to establishing principles of therapeutics which shall combat, not symptoms merely, but the cause of the disease and shall do this with the certainty of science rather than of empiricism. The lectures which form the present volume exhibit some of the outlines of this problem. The ideas of immunity based on the theory of "haptines," which are able to connect the invading organisms or their products with the cell products which are capable of neutralizing or destroying them, form the subject of the first lecture. These haptines, as Ehrlich shows, are not only active in attacking the bacteria or toxins themselves, but are also the agents which, by securing the attachment of opsonins and bacteriotropins, make phagocytosis possible. Ehrlich suggests that there are probably a number of specific haptines, the nature of which we do not know. The theory of the action of these bodies is forcibly set forth; and, while assent to such a theory must be given with the proviso that further investigation may considerably modify it, its acceptance at the present time undoubtedly affords a good working hypothesis. The second chapter is devoted to the consideration of a mode of immunity which has not been made so prominent in late discussions as the theory of toxins. This is called by Ehrlich "atrepsy," and he undertakes to explain the failure of certain bacteria as well as tumor cells to grow in the tissues of certain animals by supposing that the receptors by which they must appropriate nutriment have been atrophied so that they can no longer be made use of by the invading germ; hence the bacterium or tumor cell perishes for want of nutriment. In this way various instances of natural and acquired immunity may be explained. Whether this theory can be considered more than a working hypothesis is somewhat doubtful, but it is applied with considerable ingenuity and plausibility and its exposition will doubtless be read with great interest. The third and concluding chapter gives an account of Ehrlich's therapeutic studies on trypanosomiasis. The results of these very interesting and laborious researches have already been made known in other publications, but a review of them gives an encouraging outlook as to the possibilities of experimental therapeutics and the application of chemical synthesis to the construction of specific remedies. The polypharmacy of our fathers receives a late justification in the plan advocated by Ehrlich of attacking the enemy by several weapons at one time in order to secure a speedy victory. His view is that two or more remedies in non-poisonous doses may destroy an invading germ when the doses required of any one remedy would be poisonous for the host as well as the parasite.

The volume is small, neatly bound and contains as a frontispiece a portrait of the author.

NERVOUS AND MENTAL DISEASE MONOGRAPH SERIES No. 2. STUDIES IN PARANOIA. By Nikolaus Gierlich, Wiesbaden. Contributions to the Study of Paranoia. By M. Friedmann, Mannheim. Translated and Edited by Smith Ely Jelliffe, M.D. Paper. Pp. 78. New York: Journal of Nervous and Mental Disease Publishing Co., 1908.

The classification of mental diseases is both interesting and important to alienists and psychologists; yet even they are liable to be misled by the rigid systematization of cases. To the ordinary physician, however, the questions of etiology and prognosis in the individual case are more important. The conviction that paranoia is a fixed and incurable disorder is to a certain extent productive of unfortunate results. This conviction is likely to be shaken or removed by a perusal of the monographs of Gierlich and Friedmann.

Gierlich concerns himself with certain forms of periodic paranoia and paranoid delusions. He shows that many patients show a tendency to recovery, at least temporarily, with apparently perfectly normal intervals. It was possible to prevent the return of the attacks by suitable measures, or at least the severity of the attacks could be considerably lessened by guarding against weakening of the patient at certain seasons. If these precautionary measures were neglected the attacks returned in their typical form with striking similarity without evidence of progress in the system of delusion. The second and third attacks presented a less violent reaction than the original one. These cases can not be distinguished from those of paranoia at the time of the attack and are merely characterized by the absence of progression and by the mildness of the course. In reference to the question of the genesis of paranoia, whether it takes its origin in the emotions or is a purely intellectual disease, Gierlich takes a middle position. The foundation of delusion formations, in his opinion, consists in disturbances of the mental condition by violent protracted emotion, in combination with an existing weakness of judgment toward these highly accentuated ideas. The further course of the condition will depend essentially on the brain power, which determines whether or not the delusional interpretation will extend later on to ideas not accentuated in the sense considered or will disappear after the subsidence of the emotion.

Friedmann's contribution concerns certain mild forms of paranoia which prove to be more or less curable. The curability depends on causes at present not sufficiently understood, but one important fact has been learned, namely, that an endogenous paranoia is curable when the disease bears the character of a direct reaction to a definite external cause i. e., if the delusion formation shows no tendency to spread. On the other hand, the intellectual peculiarity which made the delusion formation possible may persist, for the patient is always confident of the truth of his delusions. The clinical picture, however, and the conduct of the patient depend on the condition of the affects. The cases discussed by Friedmann necessitate a modification of the definition of Kraepelin, who states that by paranoia is meant a disorder in which there is an insidious development of a permanent unshakable system of delusions, while, at the same time, the patient remains clear and there is no formal disorder of ideation. In the cases cited by Friedmann the development is not insidious, nor are the delusions permanent and unshakable, at least in the sense of remaining active.

Friedmann concludes that there are three forms of endogenous delusion formations: 1. The delusion formation, once started, progresses slowly but irresistibly, and the affect does not again become calmed down (genuine chronic paranoia). 2. The delusions remained confined to the conflict, but the delusions fade again and the affect disappears within a space of a few years. 3. We have nothing more than a clouding of judgment of a simple kind and ideas of reference are few, or entirely wanting, conditions, which for the most part run an episodic course.

THE RECTUM, Its Diseases and Developmental Defects. By Charles B. Ball, M.Ch., F.R.C.S.I., Hon. F.R.C.S., Regius Professor of Surgery in University of Dublin. Cloth. Pp. 332, with illustrations. Price, $10.50. New York: Oxford University Press.

The book is based on the Lane Lectures on Diseases of the Rectum delivered in San Francisco in 1902 and on the Erasmus Wilson Lectures on Adenoma and Adenocarcinoma of the Rectum delivered at the Royal College of Surgeons, England, in 1903. Chapter 1, dealing with the anatomy of the rectum and anus, deserves especial mention. The morphology and relations of the rectum and anal canal are given in a manner rare even in large special surgeries. The figures accompanying the text are clear. The chapter devoted to fistula is suggestive, and the classification of fistulas is more correct and self-explanatory than such classifications usually are. The operation performed by Professor Ball—that of suture after the connective tissue wall of the fistula has been thoroughly curetted away—has fallen into disuse in America, notwithstanding that it was devised by Dr. Stephen Smith and its efficacy fully demonstrated.

In the discussion of the pathology of hemorrhoids it might have been suggested that a number of competent investigators believe, after the histologic examination of many cases, that most hemorrhoids are angiomas.

In connection with the treatment of carcinoma one is pleased to see the care with which the preparation of the patient and the field of operation is insisted on. The efficacy of the antiseptics used in the preparation may be doubted, but one can not doubt the value of the mechanical actions of the solutions which are advised.

Ball's operation for removal of the rectum, which had been used in but one case at the time the book was published, seems to be on correct lines. We regret that the author has not given more of his personal experiences with the different methods of radical removal of the rectum for malignant diseases and the advantages and disadvantages of each.

In the chapter on colotomy no mention is made of the Maydl bridge or of Ward's stitch, which certainly have simplified the technic of this operation. Ball has apparently limited himself to the discussion of the operation which appeals most to him. A short but satisfactory paragraph is devoted to the after-treatment of colotomies.

The illustrations are good and the book is printed in large, clear type on good paper.

INFANTILISM FROM CHRONIC INTESTINAL INFECTION. By C. A. Herter, M.D., Professor of Pharmacology and Therapeutics, Columbia University. Cloth. Pp. 118. Price, $0.90. New York: Macmillan Co., 1908.

The fruitful results of the combination of clinical observation, chemical and bacteriologic research make this monograph an epoch marking if not epoch making work. The labors of the chemist and the bacteriologist in the study of the feces have long been of great interest from a scientific viewpoint, but gave little indication of leading to important practical results. But in this study of infantilism Dr. Herter has shown how they can be used to solve a problem in clinical medicine which otherwise would have long remained unsolved and which is of the greatest importance in the development of many individuals. The book shows also how much can be accomplished by the careful and persistent study of a few—in this instance five—cases. The patients were children whose growth was checked by intestinal digestive disorder. Dr. Herter notes an intolerance of carbohydrates and the study of fecal flora shows that the normal Gram negative bacilli and cocci, have been replaced by Gram-positive bacilli, one of which, *B. infantilis*, is regarded as having an etiologic relation to the disease. There is a considerable loss of fat by the stool and this, together with the restriction of carbohydrates, causes a condition of undernutrition, which accounts for the lack of development of the tissues in general. The lessened absorption of fats has a further ill effect, by withdrawing calcium and magnesium in the form of soaps, so that, for lack of mineral constituents, the skeleton fails to develop. The condition is found to be a chronic one in which the bacilli have firmly established themselves by long habituation, having first become implanted during a case of acute or subacute gastroenteritis in early infancy. Dr. Herter's studies have led him to conclude that such patients can best be treated by regulation of the diet, in which the use of gelatin plays a most beneficent rôle.

The success of this chemico-bacteriologic study emphasizes the importance of thorough investigation of cases of chronic ill health and malnutrition in childhood. Routine physical examination and prescription of temporary remedies in such cases will do little good, and the physician who contents himself with such customary treatment is taking a short-sighted view of the case. He should realize that the future of his patient is in his hands, and depends on a thorough, patient investigation. This book shows that practical results from such an investigation are possible, and that the establishment of institutes where such investigations can be adequately carried on ought to be an achievement of the near future.

This book is destined to act as a powerful stimulus to similar work, and even to those physicians who are not so situated as to undertake original work on similar lines, it is fitted to give a conception of the possibilities of such investigation and to open vistas of the future progress of scientific medicine, that may be an efficient antidote to pessimistic and nihilistic views.

RETINITIS PIGMENTOSA: With an Analysis of Seventeen Cases occurring in Deaf Mutes. An Essay Awarded the Alvarenga Prize of the College of Physicians of Philadelphia, July, 1908. By William T. Shoemaker, M.D., Philadelphia. Laboratory Examinations of the Blood and Urine by John M. Swan, M.D., Philadelphia. Cloth. Pp. 106, with illustrations. Price $2. Philadelphia: J. B. Lippincott Co.

Dr. Shoemaker was awarded the Alvarenga prize of the College of Physicians of Philadelphia for this work, a fact which indicates its excellence from a scientific standpoint. The basis of the work was the study of seventeen carefully selected typical cases of retinitis pigmentosa occurring in deaf-mute children. The study begins with the history of the disease and its histology and pathology. Then follows the symptomatology and etiology, analysis and summary of the cases, laboratory findings, treatment, and then Dr. Shoemaker's conclusions, covering in all 106 pages. A bibliography and index are appended. There are three good colored plates of the fundus lesions, drawn by Dr. Mary Buchanan. The book is printed in large type on very good paper, not too highly finished, and therefore easy on the eyes.

SANITARY SCIENCE AND ALLIED SUBJECTS. Selected Bibliography. Arthur W. Smith, M.A. Paper. Price, 50 cents. Boulder, Colo.: A. A. Greenman.

This pamphlet was prepared for the use of classes in sanitary science in the College of Liberal Arts, University of Colorado. It contains 420 titles, covering such subjects as infection, immunity, toxins, antitoxins, opsonic methods, disinfection and disinfectants, water, milk and food supplies, sewage disposal, vital statistics, patent medicines, public health administration and others. It is impossible, of course, that a bibliography covering such a range of subjects within so small a compass should make any attempt at exhaustiveness; but the annotations, which are analytical and to some extent critical, add to its usefulness.

QUAIN'S ANATOMY. Vol. I. Embryology. B. T. H. Bryce. Cloth. Pp. 275, with illustrations. Eleventh Edition. Price, $3.00. New York: Longmans, Green & Co., 1908.

This work has long been a recognized authority in anatomy and the present edition is fully up to previous standards. Much new matter has been added, especially in the way of illustrations. The customary chapters on general embryology and fetal development are followed by chapters on the growth of the various organs and systems. In the section on morphogenesis of the spinal cord and brain, a number of original photographs and drawings have been added which help to illuminate this intricate subject. The sections on the development of the special sense organs are also enlarged. The thanks of students and teachers are especially due to the publishers for the excellent index, a point too often overlooked in scientific text-books. Not the least attractive feature is the fact that this work is published in four small volumes, which are much more convenient to use than a single cumbersome book would be.

WANDLUNGEN DER MEDIZIN UND DES AERZTESTANDES IN DEN LETZTEN 50 JAHREN. Von O. von Bollinger. Paper. Pp. 44. Price, 1 mark. München: J. F. Lehmanns Verlag, 1909.

Von Bollinger, in this address delivered on the occasion of his inauguration as rector of the University of Munich, traces the progress of medicine in all its branches during the last century and especially during the last fifty years. In addition to presenting the advance in science he reviews the changes in the position of the medical profession with special reference to the growth of specialism and of quackery, and to the struggle between the *Krankenkassen* and physicians brought on by the industrial insurance legislation. In such a general review it is of course impossible to go much into details, suffice it to say that the reader is given a fair and correct impression of the problems and conditions which the members of the medical profession in Germany have to face.

CONSUMPTION. By C. H. Stanley Davis, M.D., Ph.D., Member of the New Haven County Medical Society. Cloth. Second Edition. Pp. 218. Price, $1.00. New York: E. B. Treat & Co., 1908.

With the avowed object of showing the curability of consumption "from its first beginnings to its last stages" Dr. Davis presents this second edition for popular and professional reading. The positions taken in the various chapters concerning causes, diagnosis, treatment, exercise, etc., are in accord with the generally accepted opinions of the day and the dietary of several sanatoria is set forth in detail. Dr. Davis' optimism regarding the curability of consumption in its later stages is shared by very few practitioners of large experience.

MALARIAL FEVERS. By S. P. James, M.D., D.P.H., Major, Indian Medical Service. Edition 3. Paper. Pp. 94. Calcutta: Superintendent Government Printing, India, 1908.

This is a compendious statement of the nature, diagnosis and treatment of malaria with instructions for the obtaining and treatment of blood films. It gives also directions for identifying the ordinary varieties of mosquito. It is intended especially for assistant surgeons, internes and students, and is particularly adapted to use in India.

PHYSICAL DIAGNOSIS AND LABORATORY DIAGNOSIS. By Henry P. Kohberger, Ph.B., M.D., Associate Professor of Medicine and Director of Clinical Laboratory, University of Pittsburg (Med. Dept.) Flexible leather. Pp. 155. Price, $1. Pittsburgh: Medical Abstract Publishing Co.

OBSTETRICS IN ABSTRACT. By William D. Inglis, A.M., M.D., Professor of Obstetrics in the Starling-Ohio Medical College. Flexible leather. Pp. 171. Price, $1. Pittsburgh: Medical Abstract Publishing Co.

These little books give in a very elementary way the essential facts in physical and laboratory diagnosis and in obstetrics. They may be useful to the recent graduate in helping him to correlate symptoms. They are of convenient "vest pocket" size and are well bound.

Miscellany

Extension of the Frontal Sinus and Ethmoidal Cells Over the Orbit.—Ernst Witt (*Anat. Hefte. Beitr. u. Ref. f. Anat. u. Entwcklgsgesch.*, Abt. 1, 1908, xxxvii, 142) makes a study of the frontal sinus and its adjoining ethmoidal cells in 323 skulls in the dissecting room. Those frontal sinuses and ethmoidal cells which are abnormally large and which extend high up in the frontal bone and over the roof of the orbit are particularly considered. He considers the relations of the frontal sinus and orbital cells (i. e., those ethmoidal cells which extend laterally over the roof of the orbit) as exceedingly variable. This is explained by the mode of development. "The sinus frontalis and cellulæ ethmoidalis arise from anlages, which developmentally are very closely related and which may replace one another." Whichever anlage of the anterior ethmoidal cells first develops a distinct projection into the wall of the nasal cavity becomes the anlage of the frontal sinus. The size of the frontal sinus and orbital cells are likewise very variable in the adult. "In about one-third of the cases the roof of the orbit is more or less undermined by them." Three types of variation are recognized: (1) the roof of the orbit undermined by the sinus frontalis alone; (2) by the sinus frontalis and one cellula orbitalis; (3) by sinus frontalis and two cellulæ orbitales. "Each of *these cavities* has its individual ostium. The sinus frontalis and cellula orbitalis anterior always open into the middle nasal passage (i. e., middle nasal concha), the cellula orbitalis posterior frequently into the upper. Between the sinus frontalis and the cellula orbitalis anterior a communication sometimes exists." For diagnosis the inspection in the living subject, especially the relations of the arcus superciliares, he considers not trustworthy. "In the opened frontal sinus, on the other hand, the occurrence of a distinct posterior wall indicates the likelihood of the presence of an orbital cell."

Is Cholin Present in the Cerebrospinal Fluid of Epileptics?—S. Kajiura's researches (*Quart. Jour. Exper. Physiol.*, 1908, i, 292) lead him to agree with Halliburton and Mott, whose investigations on the presence of cholin in the cerebrospinal fluid and blood lead them to conclude that cholin is present only in organic diseases of the nervous system, and that this is a fact of diagnostic value in distinguishing diseases in which there is an actual breakdown of nervous material from those which are merely functional. Negative results (by the periodid test) in cases of meningitis are noted. "Inflammation of the meninges does not necessarily cause any noteworthy change in the underlying cerebral matter." Considerable criticism of Donath's micro-polariscopic test for cholin is indulged in, with the conclusion that it is unreliable, since it gives positive results in such cases as cancer of the stomach, nephritis, postbasic meningitis, with normal cerebrospinal fluid or even with distilled water. Kajiura concludes: 1. Rosenheim's periodid test for cholin is both trustworthy and reliable. 2. By this test, cholin is found to be absent from cerebrospinal fluid in cases of genuine epilepsy.

Eighteenth Report on Recent Teratologic Literature.—Dr. William Wright, in the *Journal of Anatomy and Physiology*, October, 1908, compiles and classifies the literature relating to teratologic subjects which has appeared since his last report. Both experimental and general teratology are considered. It is the aim of Dr. Wright to compile these reports approximately once each year and to include all cases of abnormities and malformations which are published from time to time. In this one a short abstract is given of each case reported in the various journals. Several interesting cases of general malformation, of duplication, of fetus in fetu, of defective and rudimentary organs, limbs, head and neck, etc., occur. Many cases of congenital absence of limbs and thoracic and abdominal organs, the transposition of structures and viscera, and congenital defects in the reproductive system are found in the reports. These reports will furnish a brief encyclopedia of teratology. They now cover a period of about twenty-three years.

Recent Researches on the Determination and Heredity of Sex.—Prof. Edmond B. Wilson, after many years' work on the cell, gives in *Science*. Jan. 8, 1909, some of his results and conclusions which have a bearing on the determination of sex. In his opinion, "it may fairly be said that substantial advances in the analysis of the mechanism of sex-production are being made by experimental and cytologic research," since it seems fairly certain that factors which determine sex are no longer purely hypothetical, but are integral units which may be seen with the microscope in the germ cells. The factors which determine sex are to be found in the germ cells of the male. They are what he terms accessory chromosomes and can be easily distinguished microscopically. "In all cases the spermatozoa are formed in pairs, and the chromosomes are so distributed that one member of each pair receives the *x*-element," i. e., the accessory chromosome. Those spermatozoa which receive the accessory chromosome are female-producing, those which do not receive them are male-producing. The egg seems to play a relatively passive rôle in the determination of sex. It seems to have no preference as to whether it shall be fertilized by a male-producing or a female-producing spermatozoön. Sexual predestination and heredity and the various interpretations of sex heredity on the Mendelian theory are discussed.

The Artificial Production of Decidua and the Importance of the Ovaries on the Formation of Decidua.—It is asserted by L. Loeb (*Zentralbl. f. Physiol.*, 1908, xxii, 498) that a decidua has been produced artificially in rabbits and guinea-pigs. Two to 9 days after ovulation (without previous copulation) the uterus wall was slit open, either transversely or longitudinally. A typical decidua resulted. These results were not obtained where the ovaries were taken out immediately after ovulation. A decidua was also formed in a half of the uterus which was transplanted into the subcutaneous tissue. These experiments are put forth as evidence against the nervous influence of the ovary on decidua formation and as favoring an internal secretion which is carried to the uterus through the blood. The decidua formation in the transplanted piece of the uterus would indicate that the egg does not act specifically, but rather mechanically, upon the mucous membrane of the uterus, and, further, that the uterus has been made ready for this action by an internal secretion of the ovary.

Simple Ulcer of the Stomach in Young People.—E. Parmentier describes a case of simple ulcer of the stomach in a girl of 13, cured by a nine months' course of treatment. In another case the chronic simple ulcer had caused symptoms from time to time since childhood, with occasional melena. The patient was a young woman of 20. The recurrence of symptoms in this patient several times after apparent cure from different courses of treatment shows the uncertainty of the outlook in some cases. In his communication in the *Bull. de la Soc. Méd. des Hôp.*, Dec. 24, 1908, p. 812, he reviews sixteen other cases that have been published of simple ulcer in children under 14, six of them from American literature. In some cases the only symptoms were convulsions and unconsciousness when perforation occurred, followed by death in a few hours. In three cases the children died from progressive inanition. A cure is recorded in some of the cases, but it is more probable that it was merely a relative and temporary cure, as trouble is liable to develop again later.

Arachnoidism.—S. Mazza applies this term to the syndrome produced by the bite of a poisonous spider, and in the *Semana Medica*, January 7, he gives an illustrated description of a case with sloughing of part of the arm a month after the bite. The patient was a man of 42 and when seen twenty-four hours after the bite the general symptoms included chills, vomiting, jaundice and delirium, slow and small pulse, scanty, blood-stained urine and bloody diarrhea with fever. He recovered under injection of salt solution 500 c.c. every twelve hours with caffein every three hours for nearly three weeks and camphorated oil every six hours at first. Strychnin was also given at first, and ergot to combat the tendency to hemorrhage, with local treatment of the lesion on the arm and oxygen to combat the dyspnea. On account of the finding of methemoglobin in the blood, as in intoxication from potassium chlorate, he gave an enema of sodium bicarbonate and glycerin. It may have been a mere coincidence but the signs of hemolysis subsided after this enema. In another case the bite was from an ordinary centipede; exophthalmos, chills and general depression were the main symptoms.

The Ductless Glands (Pituitary Body, Suprarenals and Ovaries) in Epilepsy.—Claude and Schmiergeld (*Compt. rend. Soc. de biol.*, 1908, lxv, 196-199) give the results of an examination of these glands of internal secretion in fifteen cases of epilepsy. In three cases the pituitary body showed a localized area of sclerosis. Capillary congestion was present in one. From the distribution of the cellular granules and the staining reactions of the cells and the increase in the colloid material in the above three cases, a hypersecretion of the pituitary body is suggested. The pituitary body in the other twelve cases showed histologic evidence of a decrease of functional activity. In all cases the suprarenals were smaller than normal. In seven cases the histologic picture was distinctly that of hypofunctional activity. In only one case was there evidence of hypersecretion of the gland. With the ovary the changes were not so pronounced, and their significance was more difficult to determine. The ovaries were small and usually poor in Graffian follicles. An examination of the pancreas, liver and kidney revealed nothing.

Vaccination Against Cholera.—A Russian committee including Professor Podwyssotzki has drawn up a circular of instructions for prophylactic vaccination against cholera, and the circular has been officially adopted by the authorities and published for general distribution. The following points are emphasized: 1. The statistics to date show that prophylactic vaccination guarantees protection to a certain extent against cholera, but the vaccinated must be careful to observe the general hygienic precautions. 2. The vaccination must not be compulsory. 3. Anticholera vaccination is harmless and causes only a brief reaction, such as slight swelling and tenderness of the wound, higher temperature, headache, occasional swelling of the glands and slight digestive disturbances. Severe reaction occurs only exceptionally. 4. Of the two methods in vogue: vaccination with living cultures (Haffkine), or with killed cultures (Kolle), the latter is to be preferred, as the public have more confidence in this technic. 5. During an epidemic of cholera the vaccination must be done with great care, to exclude those already infected, and those liable to be exposed to infection before immunity is realized. On this account, during an epidemic, the excreta should be examined for cholera germs; if found the patient should not be vaccinated. All the vaccinated must be warned that immunity is not realized until the fifth or sixth day, consequently, during this interval they must avoid chances for contagion. 6. The vaccination must be repeated two or three times at intervals of from five to seven days, or not until after the signs of the reaction have vanished. The first dose of from 0.5 to 1 c.c. can be increased to 2 or 3 c.c. on the repetition. Children under 2 years are given 1/10 of this dosage; between 2 and 10 from 1/10 to ½; and between 10 to 15 from ½ to ¾. A pregnant woman should be given only a small dose. Acute febrile diseases and acute gastrointestinal catarrh contraindicate the vaccination. Great caution should be observed in case of debilitated, anemic persons. 7. Physicians should keep a careful record of all vaccinations, noting the name, age, profession and residence, state of health, whether the stools have been examined for cholera, the kind of cholera vaccine used, when prepared, place of injection and dosage each time, date of each vaccination, form and duration of the reaction, and the outcome of the vaccination, whether the patient escapes the cholera or is affected or dies, with dates. The circular is given in full in the *St. Petersburg med. Wochenschrift*, Jan. 30, 1909.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Arizona: Phoenix, April 5-6. Sec., Dr. Ancil Martin.

Arkansas: Three boards, each at Little Rock, April 13. Regular Sec., Dr. F. T. Murphy, Brinkley; Homeopathic Sec., Dr. P. C. Williams, Texarkana; Eclectic Sec., Dr. A. J. Widener, Little Rock.

California: San Francisco, April 6. Sec., Dr. Charles L. Tisdale, Butler Bldg.

Colorado: Denver, April 6. Sec., Dr. S. D. VanMeter, 1723 Tremont St.

District of Columbia: Washington, April 13-16. Sec., Dr. George C. Ober, 210 B St., S. E.

Idaho: Boise, April 6-7. Sec., Dr. W. F. Howard, Pocatello.

Illinois: Northwestern University Bldg., Chicago, April 15-17. Sec., Dr. J. A. Egan, Springfield.

Minnesota: Old Capitol, St. Paul, April 6-9. Sec., Dr. W. S. Fullerton, 214 Am. National Bank Bldg.

Montana: The Capitol, Helena, April 6. Sec., Dr. W. C. Riddell.

North Dakota: Grand Forks, April 6-8. Sec., Dr. H. M. Wheeler

Oklahoma: Guthrie, April 13. Sec., Dr. Frank P. Davis, Enid.

Rhode Island: State House, Providence, April 1-2. Sec., Dr. Gardner T. Swarts, 315 State House.

Utah: Salt Lake City, April 5-6. Sec., Dr. R. W. Fisher.

West Virginia: Huntington, April 13-15. Sec., Dr. H. A. Barbee, Point Pleasant.

Council on Medical Education Conference

The fifth annual conference of the Council on Medical Education will be held at the Auditorium Hotel, Chicago, Monday, April 5, 1909, the session to begin at 10 o'clock. Besides the reports of the Chairman and the Secretary, there will be a report from a special committee on "Standard Medical Curriculum." There will also be addresses on "Some Results of the Higher Standards of Preliminary Education" and on "The Character of the State License Examination." Many questions of special interest to members of state examining boards will be discussed. A large attendance is already assured and a most interesting session is expected.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

Assn. of Amer. Med. Colleges, New York, Mar. 15-16.
California, Medical Soc. of State of, San Jose, April 20.
District of Columbia, Medical Assn. of, Washington, April 27.
Florida Medical Association, Pensacola, April 7-9.
Georgia, Medical Association of, Macon, April 21.
Mississippi State Medical Association, Jackson, April 13.
Missouri Valley, Medical Society of, St. Joseph, March 18-19.
South Carolina Medical Association, Summerville, April 21.
Tennessee State Medical Association, Nashville, April 13-15.
Tropical Medicine, American Society of, Washington, April 10.

CHICAGO MEDICAL AND CHICAGO NEUROLOGICAL SOCIETIES

Joint Meeting, held Feb. 10, 1909

DR. L. HARRISON METTLER, President of the Chicago Neurological Society, in the Chair

SYMPOSIUM ON PSYCHOTHERAPY

The Religious Therapeutic Movement

DR. ISADOR H. CORIAT, Boston, Mass.; Probably no movement in contemporary medicine has attracted more attention and more criticism than the work taken up by the Emmanuel Church in Boston, and called the Emmanuel movement. Why, I do not know, because what the Emmanuel Church has attempted is the establishment of a psychotherapeutic clinic for the treatment of a limited type of functional nervous disorders under rigid medical control. The action of the mind on the body is well known, and recently in Russia, under the leadership of the physiologist, Pavloff, methods of action of mind on the body have been applied to the lower animals. For instance, he will take a dog, whose esophagus has been opened in the neck, and in which a gastric fistula has been made, and give that dog some meat to swallow. Of course, the meat comes out from the esophageal fistula and never reaches the stomach. Immediately there is the secretion of gastric juice. He gives the dog pebbles to swallow, and there is no secretion of gastric juice. To my mind, experiments like that speak more than anything for the action of the mind on certain bodily functions. Medicine, it appears to me, is no longer limited to the dispensing of drugs, to the application of electricity, or to hydrotherapy, or to any of the various methods; medical men have broadened out and are in touch with every human activity. We know from the work of the Massachusetts General Hospital how remarkable have been the results in the so-called social service department, where patients are recommended by physicians in whom there seems to be nothing particularly wrong, yet seem to be out of harmony, dissatisfied with their surroundings. The social worker takes those patients and modifies their surroundings, with the consequence of cure or alleviation of the condition. In 1906, Dr. Worcester and Dr. McComb started what has since become known as the Emmanuel movement; but unfortunately it has spread in every direction. Sometimes, I might say, it has spread into incompetent hands. Of course, they are not responsible for what others are doing; they are only responsible for their own work. Dr. McComb is a psychologist, and Dr. Worcester is a Doctor of Philosophy and Professor of Psychology, well-equipped for the psychologic treatment of certain nervous disorders. Patients are treated individually. There is no class treatment. Small numbers at a time are taken. They are only treated after they pledge themselves to remain for a number of weeks at a time. The work is under absolute medical control. About 50 per cent. of the patients are sent directly by physicians, with notes, and these physicians suggest in these notes that there is nothing organically wrong, and they believe the patient or patients will be proper subjects for psychic treatment. The other 50 per cent. of the patients are examined on certain clinic days, and only those patients are accepted who are proper subjects for psychic treatment. Organic cases are never accepted, or cases in which an organic complication predominates over the functional condition. Of all patients who apply to the Emmanuel clinic, about 75 per cent. are rejected. The other 25 per cent. are accepted. Drs. Worcester and McComb work with only a small group at a time; the others are put on the waiting list. If a patient should come without notifying his or her physician, and, at the same time is under the treatment of a physician, that patient is not accepted. The patient is sent back to the physician with the request that a written note be forthcoming.

The criticisms of the movement are these: (1) The danger of the spread of the movement into incompetent hands. As medical men we must recognize that incompetent men, incompetent clergymen, may start this work after reading two or three books, without a long psychologic preparation. There they will fail; they will bring justified criticism of the medical profession down on their heads. (2) The criticism has been that these ministers are practicing medicine. Let us see if they are: For a long time they have limited their cases to those which show a well-recognized moral, ethical or spiritual defect, whether or not that was the symptom underlying the functional disorder. I presume that the clergyman is well adapted to treat that type of case. The patient does not expect spiritual consolation or ethical lectures from his physician, but does expect them from his clergyman, and therein lies the therapeutic value of any such method as that. Clergymen should take only patients in whom the moral, ethical or spiritual elements predominate, and then only under rigid medical control. In the clinic in Boston not only is the patient given a thorough medical examination from the beginning, but, if accepted, that patient is kept under constant medical control and reappears from time to time for re-examination. On account of the storm of criticism that has arisen in Boston, a new method of medical control has been instituted which will soon go into effect. A committee composed of four physicians of Boston formulated several rules which have been published in the various medical journals. The examination of patients at the church clinic has been abolished under these new rules. If a patient comes without a note from a physician, he is given an alphabetical list of physicians attached to the various hospitals. The patient is sent to an internist who makes an examination and states whether or not the patient is fit for the psychotherapeutic treatment of the Emmanuel Church. If a specialist is necessary, the internist calls in a specialist. Even before these rules were instituted the movement was safeguarded by rigid medical control, and under these new rules the control is still more rigid. No patient is accepted unless he pledges himself to remain under treatment for at least six weeks, and if at the end of that time longer treatment is necessary he is expected to remain longer. The methods used are in line with well-recognized methods of psychotherapeutics. The results with alcoholics have been very gratifying. Many of the poorer alcoholics not only are given psychotherapeutic treatment, but the social service worker inquires into the surroundings, the home conditions, and if the individual lives in a district of the city where the temptation to drink is the greatest, arrangements are made to move him to more cheerful surroundings. If there are any dangers in this clinic, they are thoroughly safeguarded by the training of the clergymen who have undertaken the work and by the thorough medical control over such work. The criticism that the clergyman is taking up the physician's work does not appear to me to be valid, because these clergymen are doing a type of work for which they are eminently fitted as clergymen and as psychologists, a type of work which we as physicians could not take up, because we have not had that particular form of training.

Psychotherapy from the Psychologist's Point of View

PROF. JAMES R. ANGELL, University of Michigan: I have been amazed to see how widely the view still obtains that some sorts of mental processes do not have corresponding brain processes. When we talk about therapeutic methods of treating diseases through the mind, it does not mean that we are not producing any change in the nervous system; it simply means that we are producing changes in the nervous system by initiating changes in what we call the mind; and, as a matter of fact, when we come to conclusions and see what we have done, we have said something, done something, or brought something to pass which affects the sense-organs of the person with whom we are dealing, and that process inevitably affects the brain. In such cases we are dealing with nothing which excludes the action of the brain or nervous processes. Mental processes have corresponding brain processes and if we are not able to point them out at any particular time it is in consequence of our ignorance and not because the facts are lacking to substantiate it. So far as I know, psychologists connected with universities are, for the most part, fundamentally opposed to anything which might be called mysticism in reference to this movement. I think a good deal of the antagonism we have had so far toward certain phases of this psychotherapeutic movement has been based on the fact that an element of mysticism has been injected into it. I take it that three distinct kinds of practice are represented in this movement: First, I should recognize that which is being carried on by physicians, neurologists and medical men; second, I should recognize that which is being carried on by ministers or laymen in conjunction with physicians and under their guidance; third, I should distinguish that practice which is being carried on by persons who absolutely reject all reference to medical guidance, and I include in that class the Christian Scientists and the mind cures of various sorts in one form or another.

From the beginning of time every physician has made more or less use of psychotherapeutic methods, in that they have brought and are bringing to the sickroom a hopeful personality, cheerfulness, and an attitude of encouragement to the patient. I have nothing but the deepest respect and the deepest confidence in the outcome of the use of psychotherapeutic methods by medical men. It is from medical men we must expect real advancement and information of what has been and can be done in this direction. Our attitude toward the ministers or laymen who are working under medical control is essentially this: There is a large group of individuals who, to all intents and purposes, are mentally abnormal, who need help, and who, in the first place, are not likely to go to a physician to get that help, because their troubles are perhaps moral rather than physical. If they should consult a physician, they are not likely to get from the average physician what they really need, and I can not but believe that ministers who are well trained for their duties have a wide range of usefulness in this particular direction; and I think it is problematical whether the medical practitioner can really fill the bill, and whether he will wish to try to, or whether he ought to try to.

Into the training of the average medical man there should be introduced a larger measure of psychologic work than has heretofore been the custom. The better medical colleges recognize this and are providing for instruction in psychologic scientific work as part of the regular curriculum. At present, however, the average psychologic department does not offer to the medical school exactly what it ought to have, and it will require some adjustment in almost all institutions. The average practitioner has obtained his knowledge of psychotherapy either by personal experience or by working in the office of a neurologist, and the acquirement of this knowledge has been rather accidental than an essential and radical part of medical training.

Medical Uses of Hypnotism

Dr. Hugh T Patrick: An individual who is easily hypnotizable is one who is instinctively obedient and credulous, and who believes without criticism, without analysis, and without any particular process of reasoning, what is told him. It is well-known that the percentage of hypnotizable individuals in the German army is great, because these soldiers are so thoroughly trained in obedience that it becomes instinctive. On the other hand, certain individuals are inherently refractory to hypnotism. Many of these individuals come and request to be hypnotized, and believe that they can be cured by hypnotism. They are largely the type of individuals who read about cases in newspapers and magazines; they are patients who attempt some sort of self-analysis of their own symptoms, and of their own condition. They reason in their own particular way about the nature of their maladies; they have distinct and sometimes very fixed notions. They have the exaggerated ego, accompanied with a peculiar sort of mental hypersensitiveness and fixity in their own opinions. These people instinctively, but not purposely, keep awake to see how it feels to be hypnotized. They are the refractory individuals, in whom it is needless to make the attempt. In everyday practice hypnotism can be used, first, in diagnosis, and second, in treatment. Sometimes hypnotism is of more use in diagnosis than in treatment. It is useful sometimes in the diagnosis of various seizures or attacks, in nervous explosions of one kind or another, and one of these is the fit or convulsion. Occasionally, it is impossible to distinguish from the symptoms which we perceive whether a given patient is suffering from hysteria or from epilepsy. Occasionally hypnotism may clear it up. For example, not long ago a man was brought to me whose wife gave an account of his having had an epileptic seizure, and immediately following it an epileptic furor. After the fit he passed into a condition of great excitement, with destructibility, in which he smashed open a door, tore down the curtains, chased his wife through the house, got a gun and chased his brother-in-law down the yard, out into the road for some distance, and threatened to shoot him. During the physical examination there were two little things that occurred that made me doubt the correctness of the diagnosis I was then forming in my mind, and after further examination there was a question in my mind whether this had not been an hysterical attack. I put the man to sleep, and he related to me in detail all that had occurred during this seizure, the circumstances of which he had been ignorant of. He did not remember anything whatever until a considerable time after the subsidence of the furor part of his attack. During hypnosis he related every detail of what he did, and why he yelled and screamed and acted as he did.

Hypnosis helps in the diagnosis between hysteria and epilepsy, or between the hysterical and epileptic state. Hypnotism is an aid in the differential diagnosis between functional disease and organic disease. Hiccough may be a rebellious symptom of grave organic disease. It occurs as a very troublesome, rebellious and continuous symptom of hysteria, and sometimes hypnosis will settle the diagnosis at once. Hypnotism also helps in the diagnosis in those cases in which there is a combination of organic disease and functional disease, or organic disease and hysteria, in which suggestion during hypnosis will remove or alter certain symptoms, so as to enable the practitioner to distinguish that part of the symptomatology due to organic disease from that due to functional trouble.

When we come to therapeutics, in my opinion the cases in which suggestion during hypnosis is the basis of the treatment are very infrequent. I could enumerate many clinics where hypnotism has been used to a great extent for a more or less limited period. I could also tell from my own experience of a good many more or less prominent medical men who have used it to a greater or less extent and have gradually or nearly abandoned it. In organic diseases hypnotism has an exceedingly limited use, but it now and then has a very distinct and very great use. Hypnotism is of little or no avail in cases of melancholia, paranoia, dementia præcox, etc. It may be of use nowadays in that group of cases which comes under the head of psychasthenia—phobias, imperative ideas, etc. In some of these hypnotism is of great use.

Psychotherapy from the Physician's Point of View

Dr. Sydney Kuh: Our influence on a patient's mind begins with the moment that the sufferer enters the office. The appearance of the room, of the medical apparatus that it contains, and the physician's personality, are the first factors which often determine whether or not the confidence of the patient so essential for success, can be obtained. The physician's *method of dealing* with his patient is of paramount importance. The neurotic individual is usually a keen observer. He watches with the greatest interest the examination of the physician, notes whether this or that organ has been overlooked, and whether the investigation is made in a careful and painstaking or in a slovenly manner. Next to the physician's personality, I should value the influence of the first examination most highly. It must indicate to the patient that his physician takes a genuine interest in his case. The best results in psychotherapy are undoubtedly obtained when the patient is transplanted into new surroundings; for most of the serious and tedious cases such a step is absolutely necessary. Even the nurse should not as a rule, accompany the patient from his home to the sanitarium. Here begins a process of re-education, which in every instance must be adapted to the individual, and for which no hard and fast rules can be laid down. An intelligent nurse, one who supports the physician understandingly in his efforts, who strengthens the patient's confidence, who diverts his mind from his troubles and pains and aches into more pleasant channels, is a *sine qua non* of success. For patients who are anemic, emaciated, poorly nourished, and for those who suffer from anorexia, hypochondriasis and the various phobias, a rest cure is often the best thing. Others may do better if sent to the country or to the mountains, where they receive new impressions and where an occupation may be found which keeps them busy, without making great demands in the way of intellectual labor. Again, others will progress most rapidly toward recovery in an institution adapted for the so-called work cure, a place where carefully regulated manual labor is prescribed according to the needs of the case. The therapeutic agent under discussion is most useful in such functional neuroses as hysteria, neurasthenia and psychasthenia. But its usefulness is not limited to such troubles. All of us make use of psychotherapy constantly, often utterly unconsciously, as a palliative in all manner of organic disease. To instill hope into the breast of the despairing, to arouse the individual who has given up the struggle, to fight anew, are things that are well worth doing, even in organic and incurable diseases. That we have not recognized the importance of psychotherapy has driven a host of sufferers into the hands of laymen, who were willing and more or less capable to make use of a method, perfectly legitimate in itself, but on which the medical profession frowned. In place of abusing those who are ready to do what we ourselves should have done long ago, let us make use of the powerful weapon at our command, and the cause for complaint will disappear. Let us wake up!

Discussion on Psychotherapy

Dr. Archibald Church: If the so-called Emmanuel movement can be controlled under medical direction and can be limited to the moral torpitudes and the religious disturbances which seem to be proper subjects for activity, and to the class of patients who are accepted in the Emmanuel church movement can influence individuals morally, or if it can of the fact that the church has been losing its dignity, its importance, its influence, and that the clergy has been shrinking in its own estimation; that theological schools have been experiencing difficulty in securing candidates for admission and students to enter the priesthood; that the churches on Michigan Avenue are practically in financial straits; that the attendance is dwindling constantly, it is not unlikely that the churches may find themselves with a Frankenstein which will give them a merry chase before it can be overtaken, and which may result to the great detriment of the dignity of the church as a whole—I mean all denominations. If this movement can influence individuals morally, or if it can cure neurasthenics and hysterics, well and good; but the difficulty is that as soon as the fashion loses its caste, or changes, these people are going to seek some other avenue for relief, some other mystical sort of aid, and the church will find itself in a position of great discomfort, with loss of its dignity and prestige.

Dr. Oscar A. King: I do not think it is at all desirable that we, as a profession, should go into partnership with clergymen in the practice of medicine. Every practitioner of medicine has views on psychology. Every one, long before the name was invented, had a practical psychology. The housebreaker and the policemen have a practical psychology that serves their purpose; and the physician has a psychology that serves his purpose. The physician is the man to make diagnoses, and not laymen. I do not believe we will ever get any benefit by associating with people who are wholly unqualified to practice medicine, who are untrained and unfit for this work, and I hope Chicago will not join Boston in this movement.

Dr. Julius Grinker: The class of people who go to Emmanuel movement clinics do not care to seek the aid of physicians. When people read of this movement and of the work that is being done, of the mysticism that goes with it, they feel an impulse to go there. I question whether the motives of some of the men undertaking this work are purely unselfish.

Dr. D. Hecht: I am glad that the Emmanuel movement is being safeguarded on all sides in Boston; but great danger lies in the fact that it may extend beyond the confines of Boston and perhaps get into less scrupulous hands, with less safeguarding. Phrenologically speaking, the bump of credulity has little or nothing to do with intellect. I have not been able to correlate the two. I have known judges or attorneys, very erudite men, go off on a tangent with the most irresponsible; yet they must be given credit for their intellectual attainments.

Dr. L. A. Derdiger: I would advise physicians to attend the meetings of these cults, get acquainted with the people, analyze what they are doing, and discuss the subjects with them. If this is done, many of them will come to the physician and say: "You have reasoned with me, you have pointed out that I have been misled, or that I have been mistaken as to this method of cure.

PHILADELPHIA COUNTY MEDICAL SOCIETY

Regular Meeting, held Feb. 10, 1909

The President, Dr. Frederick P. Henry, in the Chair

Oral Prophylaxis from the Viewpoint of Abdominal Surgery

Dr. Stephen E. Tracy: Infections of the mouth may play an important part in the production of disease in the gastro-intestinal tract and in other parts of the body, and may predispose the patient to many diseases. Clinicians, as a rule, do not pay sufficient attention to the condition of the teeth and the cleanliness of the mouth. Patients about to be subjected to operation should have the teeth, the interstices and the gum margins painted with a solution of one of the non-irritating salts of silver and then sprayed with pure hydrogen dioxid under pressure. The same surfaces should then be painted with tincture of iodin and again sprayed with pure hydrogen dioxid, followed with atomization with a pleasant, alkaline, antiseptic mouth wash. The nares and pharynx should be sprayed with a solution of hydrogen dioxid and water half an hour before the anesthetic is administered. By following this technic certain postoperative complications are avoided and convalescence is hastened.

Orthodontia As Related to Other Bodily Relations

Dr. S. Merrill Weeks: Teeth in abnormal relations prevent proper cleansing and therefore are not hygienic. They are a predisposing factor in alimentary disorders. Irregularly disposed teeth, because of their largely diminished facility for mastication, favor the habit of bolting the food, causing the food to be taken into the stomach in too large portions and unsalivated, thereby having a detrimental influence on digestion. Some nose and throat disorders are so closely associated with a certain class of irregularities as to give the orthodontist and the rhinologist a common interest both in etiology and treatment.

Value of the X-Ray in Diagnosis of Abnormalities of the Teeth

DR. MATTHEW H. CRYER AND DR. R. H. IVY: Many cases are encountered of pain referred to the region of the teeth in which diagnosis would be impossible without the use of the *x*-ray. The commonest cause of *neuralgia in which the x*-rays are of value is that of an impacted tooth. An impacted lower third molar, for example, may cause neuralgia *by pressing against* the roots of the second molar, causing resorption of the dentine until the pulp is exposed and the consequent irritation sets up neuralgia; or, the roots of the impacted tooth may press backward on the adjacent inferior dental nerve. Again, the irritation set up may cause a condensation of the surrounding cancellated bone with pressure on the inferior dental nerve and its minute branches which *ramify throughout the bone. Impacted teeth frequently* set up cellulitis of the surrounding region, extending up to the temporomandibular joint and causing false ankylosis. Other *abnormalities in which the x*-rays are of value are malformation or malposition of roots of erupted teeth, inflammatory conditions of the bone, which may or may not be caused by diseased teeth, local thickenings of bone, new growths, supernumerary teeth encysted within the jaw, malformation of the jaw bones, and pressure of deciduous teeth on unerupted permanent teeth which in turn press on the nerve. "Pulp stones" are sometimes shown by the *x*-ray. So satisfactory has been the use of the *x*-ray in these and other dental conditions its use can not be advocated too strongly. One patient, from whom a skiagraph was taken, suffered severe pain for years in the posterior part of the upper jaw. There was shown an unerupted third molar tooth with its root projecting above the floor of the maxillary *sinus, showing that it interfered* with the nerve supply of the upper teeth. An unusual condition is that of a third molar beneath and in front of the second molar, pressing against the roots of the first molar. In one patient who had exophthalmic goiter in addition to trifacial neuralgia the neuralgia was ascribed to brain tumor. The *x*-ray showed an impacted lower third molar and a thickened condition of the bone just below the roots of the second molar.

Medicolegal

Injury to Passenger Not Physically Sound

The Second Appellate Division of the Supreme Court of New York says that the plaintiff in the case of Miehlke vs. Nassau Electric Railroad Co. was a married woman, and it appeared from the evidence that she had been under treatment for some time for uterine troubles, and the defendant insisted that the evidence failed to show that the subsequent injuries, *which centered in her right side in the vicinity* of the right ovary, which was afterwards removed, were the sole cause of this necessary removal. But a passenger is not bound to be physically sound. A woman is not bound to be free from all complications in order to recover for injuries which she actually sustains. While the defendant could not be held liable for the condition in which the plaintiff was at the time of the accident, it was liable for any injury which it negligently inflicted on her, even though that injury would have been less disastrous if she had been in perfect condition at the time of the accident.

Power of City to Order Destruction of Old Building Infected with Smallpox Germs

The Supreme Court of Illinois had, in the case of Sings and others vs. City of Joliet, the question of the power of the city to pass an ordinance to condemn as a nuisance a single old wooden building and to authorize and direct the destruction of the *same and its contents*. The ordinance stated that, whereas, the building in question for some time had been, and still was, occupied by a large number of persons, all of whom were *more or less exposed* to, infected by, and suffering with the dread contagious and infectious disease known as smallpox; was thoroughly impregnated with the germs of that disease, and was, by reason of its old age, state of deterioration, and otherwise, in such condition that it could not be successfully disinfected so as to wholly destroy such germs, in consequence of which it was extremely dangerous and detrimental to the health of the citizens and residents of the city, and the necessity existed for prompt action to prevent the spread of such contagious disease, therefore the building was declared to be a public nuisance and condemned to destruction as such, after the removal by the health commissioner of the city of all occupants to the pest house, or some other place temporarily to be used as a place of isolation.

The court does not accede to the contention that the city was without lawful authority to pass the ordinance and to do the acts charged under the provision of the state constitution that no person shall be deprived of property without due process of law. It points out that by statute the city council shall have power "to declare what shall be a nuisance and to *abate the same;" also, to do all acts and make all regulations* necessary or expedient for the promotion of health or the suppression of disease.

Nor does the court accept the argument that the city was without power to pass an ordinance which had application only to the property involved in this suit; that the power given to declare a nuisance must be exercised by an ordinance general in its character, operating uniformly on all persons and on all property of the same character within the city. It says that while the precise steps necessary to be taken by *the city in declaring a thing* to be a nuisance have never been pointed out by this court, it is of opinion that the city, in the exercise of its police power, if the emergency existed, as it appeared to have existed from the recitals of the ordinance, had the power to declare the existence of the nuisance by the ordinance which it passed, provided the location and condition of the building were such that the method ordained was the only one which could in reason be used that would be effective in preventing the spread of the disease. Many cases can readily be imagined in which the city must proceed in a manner exceedingly summary both to declare and to abate a nuisance, and in such case the passage of an ordinance such as that here involved would seem to be a declaration sufficiently formal.

If the conditions recited in the ordinance existed, and if the building was so located as that persons in the city could not by the city authorities in the exercise of reasonable precaution, be excluded from the building or prevented from approaching so near thereunto as to be in danger of contagion therefrom, it would appear that the building was, in fact, a nuisance and that it might lawfully be abated.

Neither were the owners of the property necessarily entitled, before it was actually destroyed, to have a day in court, where the question whether the property was, *in fact*, a nuisance might be adjudicated before the building was destroyed. If in every emergency the owner of the property, the destruction of which is deemed necessary, must be given a hearing, the exercise of the police power would in many instances be so delayed that serious injury to public health and other public interests would result.

But the law in Illinois gives no binding or final effect to the decision of the city council on the question of fact of whether the building was a nuisance. On the contrary, this question remains an open one, which may be adjudicated.

To declare and abate a nuisance is within the scope of the power conferred on the city, and if the council, in the exercise of that power, destroys or expressly authorizes the destruction of property which, *in fact*, is not a nuisance, the *municipality* must be held liable for damages sustained by the owner. The city was not justified in destroying this property unless the statement of alleged *facts contained in the* ordinance was true, and then only if the property was so located and in such condition that the danger to public health therefrom could not be obviated by the use of some reasonable measures less drastic than the absolute destruction of the property.

No Hearing Need Be Granted Before Food is Seized and Destroyed

The Supreme Court of the United States had, in *North American Cold Storage Co. vs. City of Chicago*, a case involving principles of considerable general importance to boards of health and health officers. This was a suit to enjoin the city, its commissioner of health, chief food inspector and other officers from summarily seizing and destroying, under a city ordinance, food in cold storage as unfit for human consumption. But the court says it is of opinion that provision for a hearing before seizure and condemnation and destruction of food which is unwholesome and unfit for use is not necessary. The right to so seize is based on the right and duty of the state to protect and guard, as far as possible, the lives and health of its inhabitants, and that it is proper to provide that food which is unfit for human consumption should be summarily seized and destroyed to prevent the danger which would arise from eating it. The right to so seize and destroy is, of course, based on the fact that the food is not fit to be eaten. Food that is in such a condition, if kept for sale or in danger of being sold, is in itself a nuisance, and a nuisance of the most dangerous kind, involving, as it does, the health, if not the lives, of persons who may eat it.

A determination on the part of the seizing officers that food is in an unfit condition to be eaten is not a decision which concludes the owner. The *ex parte* (one-sided) finding of the health officers as to the fact is not in any way binding on those who own or claim the right to sell the food.

If a party can not get his hearing in advance of the seizure and destruction, he has the right to have it afterward, which right may be claimed on the trial in an action brought for the destruction of his property; and in that action those who destroyed it can only successfully defend if the jury shall find the fact of unwholesomeness, as claimed by them.

It was contended that there was no emergency in this case requiring speedy action for the destruction of the poultry in question in order to protect the public health from danger resulting from consumption of such poultry. It was said that the food was in cold storage, and that it would continue in the same condition it then was for three months, if properly stored, and that therefore the defendants had ample time in which to give notice to the complainant or the owner and have a hearing of the question as to the condition of the poultry; and, as the ordinance provided for no hearing, it was void. But the court thinks this was not required.

The power of the legislature to enact laws in relation to the public health being conceded, as it must be, it is to a great extent within legislative discretion as to whether any hearing need be given before the destruction of unwholesome food which is unfit for human consumption. If a hearing were to be always necessary, even under the circumstances of this case, the question at once arises as to what is to be done with the food in the meantime. Is it to remain with the cold storage company, and, if so, under what security that it will not be removed? To be sure that it will not be removed during the time necessary for the hearing, which might frequently be indefinitely prolonged, some guard would probably have to be placed over the subject matter of investigation, which would involve expense, and might not even then prove effectual. What is the emergency which would render a hearing unnecessary? The court thinks when the question is one regarding the destruction of food which is not fit for human use the emergency must be one which would fairly appeal to the reasonable discretion of the legislature as to the necessity for a prior hearing, and in that case its decision would *not* be a subject for review by the courts. As the owner of the food or its custodian is amply protected against the party seizing the food, who must, in a subsequent action against him, show as a fact that it was within the statute, the court thinks that due process of law is not denied the owner or custodian by the destruction of the food alleged to be unwholesome and unfit for human food without a preliminary hearing.

Even if it be a fact that some value may remain for certain purposes in food that is unfit for human consumption, the right to destroy it is not, on that acount, taken away. The small value that might remain in said food is a mere incident, and furnishes no defense to its destruction when it is plainly kept to be sold at some time as food.

Neither City, Board of Health, Nor Officers Liable for Reasonable Mistake Made in Quarantining

The Court of Errors and Appeals of New Jersey says that the case of *Valentine vs. City of Englewood and others* was brought to recover damages for alleged false imprisonment and for libel. The defendants pleaded in justification that there were 30 cases of scarlet fever in the city, and that the board of health had reasonable and probable cause to believe that the plaintiff's daughter was ill of the disease, and thereupon caused the plaintiff to be notified that they had declared his house quarantined, etc. But the plaintiff denied that the board of health had reasonable and probable cause to believe that his daughter was suffering from scarlet fever, and tendered issue thereon.

Taking up first the question of the liability of the city, the court holds that there was none, because a municipal corporation is not liable for the acts of a board of health created by public statute for the public benefit, even though its members are appointed by the municipal authorities. Moreover, the court holds that the members of a board of health, acting in performance of a public duty under a public statute to prevent the spread of an infectious or contagious disease, are not personally liable in a civil action for damages arising out of their acts in establishing a quarantine, even where the disease does not actually exist, provided they act in good faith. The exemption of officers from liability extends only to matters in which they have jurisdiction under the statutes, and it may be said that the board of health has no jurisdiction unless a cause of disease actually exists. But this view is too narrow. It is enough if the matter is colorably, though not really, within their jurisdiction.

Section 15 of the New Jersey board of health act, which forbids suits against the board, its officers or agents, unless on proof that the board acted without reasonable and probable cause to believe that the alleged cause of disease was in fact prejudicial and hazardous to the public health, does not infringe the constitutional provisions protecting private property and individual liberty. That section in effect gives an action against the board on proof of the facts therein set forth, but in such suits the question of reasonable and probable cause is for the court.

In giving this action, the legislature had the right to determine what facts should be necessary to sustain it. They imposed no novel or unreasonable condition. The provision requiring that the plaintiff should show that the board of health acted without reasonable or probable cause is in line with the existing common law in cases of this character. By common law an officer was justified, in certain cases, in making an arrest, where he had reasonable and probable cause for belief in the guilt of the person detained; and, in actions for libel, a communication, fairly made by a person in the discharge of some public or private duty, whether legal or moral, is privileged, in the absence of proof of malice. The principle underlying those cases was applicable to this one. By the New Jersey act of March 24, 1903, it is made a crime for any person, having reason to believe that he is affected with scarlet fever, to appear in any public place, and for any person knowingly to subject another, without the latter's knowledge, to exposure to the infection of any such disease. The court does not mean to say that this statute reached the present case; but it can hardly be libelous for the board of health, in good faith, to give notice of the existence of scarlet fever, when it is a crime for one who has reason to believe that he is affected with the disease to appear in public; and it must be within the power of the legislature to give the right of restraint, amounting to imprisonment, to public officers who have reasonable and probable cause to believe that the crime denounced by the act of 1903 has been, or is likely to be committed.

The question remained whether a case was made out under this statute against any of the defendants. As to the board of health, it was clear that it acted on the advice of its own physician, supported by the report made to it of the opinion of four other local physicians. The court thinks that it was not bound to accept the opinion of a physician called by the plaintiff and a specialist called from New York, but was justified in relying on the advice of its own officer.

The case as to the physician himself was somewhat different. But in the court's judgment the case failed to establish a want of reasonable and probable cause against him. He seemed to have been a reputable physician, acting according to his best light, in a case which four of his fellow physicians, to whom the symptoms were described, pronounced to be scarlet fever. Whether it was or not, he had reasonable and probable cause to think it so. The evidence of what the specialist mentioned said to him, or what the plaintiff's physician said as to the antecedent family history of the patient, would not change this result, and its exclusion was not injurious error. The inspector seemed to have acted only in carrying out the order of the board whose servant he was, and came within the words of the statute exempting officers or agents of the board from suit.

Privilege Once Waived Can Not be Recalled

The Supreme Court of Indiana says, in Pittsburgh, Cincinnati, Chicago and St. Louis Railway Co. vs. O'Conner, a personal injury case brought by the latter party, that there were two trials. On the first trial the surgeon of the railway company, who attended the plaintiff at the hospital to which he had been taken when injured, was called and examined as a witness by the plaintiff, and testified relative to what he learned at the time he was called to see him at the hospital, and concerning his intoxication at that time. On the second trial the railway company called and examined the surgeon as a witness. During his examination, the railway company offered to prove by him, in response to a question propounded to him, that he was called to see the plaintiff at the hospital shortly after his injury, and that he was at that time in a profound state of intoxication. Counsel for the plaintiff objected to the introduction of such evidence on the ground that the surgeon was at the hospital for the purpose of acting in his professional capacity for the plaintiff, and therefore, on the plaintiff's objection, it was a question of privilege with him whether he should permit him to testify or not. This objection was sustained by the trial court, and the evidence excluded. The Supreme Court holds that this was error.

Section 520 of Burns' Annotated Statutes of Indiana of 1908 provides that "the following persons shall not be competent witnesses: . . . Fourth.—Physicians, as to matter communicated to them, as such, by patients, in the course of their professional business, or advice given in such cases." It has been held by this court that the statute confers a privilege, which the patient, for whose benefit this provision is made, may claim or waive. It gives no right to the physician to refuse to testify and creates no absolute incompetency.

This privilege may be waived by the patient or his legal representatives by examining the physician as a witness concerning said privileged communication. When the privilege has once been waived by the patient in this manner, it can not be recalled, and the information is no longer privileged.

Evidence of the intoxication of the plaintiff at the time of the injury complained of was admissible on the question of contributory negligence, and as affecting the weight of his testimony; he having testified in his own behalf concerning said injury.

Not Proper Physical Culture Literature

The United States Circuit Court of Appeals, Third Circuit, says, on the appeal of MacFadden vs. United States, where it affirms a conviction of violating the postal law, that the defendant was convicted on sufficient evidence, after a correct and adequate charge, which was practically all that the court needed to know or say. The story on which the conviction was based, if not the magazine in which it appeared, of which the defendant was the editor in chief and responsible head, was suggestively lewd and bad; none the less so because of the alleged reforming and corrective purpose overlaying it, which was speciously advanced. It plainly, and in the court's judgment intentionally, catered to a prurient taste, which it was the thinly disguised object of the author to incite; and, associated, as it was, in the periodical where it appeared with certain articles on physical culture to which no objection perhaps could be made—although no such clean bill could be given to many things, articles as well as advertisements, which were there found—it was capable of doing incalculable harm; all the more so because it was intended to circulate among and attract the young, to whom the magazine was particularly addressed. The court is clear that the publication—story, if not magazine—was of the obscene, lewd and lascivious character which it was the object of Congress by the legislation in question to suppress. The standard was not the publications to which the court was referred, which were said to be just as bad, but pass muster with some. The test was the tendency to deprave and corrupt the minds of those who were open to such influence, into whose hands the publication might come, of the existence of which corrupting tendency the court has no doubt here.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

February 27

1 *The Cancer Question. J. E. Summers, Omaha.
2 *U. S. Marine Hospital Sanatorium for Tuberculosis at Fort Stanton. P. M. Carrington, Fort Stanton, New Mexico.
3 Case of Thoracic Aneurism. A. D. Eisenberg, Brooklyn.
4 *Treatment of Malignant Growths by Injections of Mercury, Arsenic and Iron. W. L. Harris, Providence, R. I.
5 Submucous Resection of the Nasal Septum. I. W. Voorhees, New York.
6 *Is the Human Body Supplied with an Autoprotective Mechanism? (Concluded.) C. E. deM. Sajous, Philadelphia.
7 Routine Urinary Examinations. H. R. Harrower, Chicago.
8 Substitutes for Enucleation of the Eye. D. F. Harbridge, Philadelphia.

1. Abstracted in The Journal, Jan. 30, 1909, p. 415.

2. **U. S. Marine Hospital for Tuberculosis.**—In an illustrated article Carrington gives an introductory historical and descriptive sketch of the U. S. Marine Hospital Sanatorium for tuberculosis at Fort Stanton, N. M. He describes the character of cases admitted, housing, prevention of infection, daily routine, rest and exercise, amusements, statistics, industrial features, mortality, and treatment, which last resolves itself into plenty of open air, as complete and satisfying a diet as possible, and rest and graduated exercise with general supervision of the patient's daily life and conduct. No medical treatment offering any noticeable betterment of the results has been found. The physicians there have been unable to secure any results with deep muscular injections of mercury succinimide even remotely approaching those reported by Wright, of the Navy.

4. **Malignant Growths.**—For two and a half years Harris has made it a practice to give every patient he operated on for suspicious or malignant growths a course of injections of iron arsenic and mercury. Breast cases have done particularly well, and the patients have generally recuperated speedily. The treatment should extend over two or three years, and the earlier it is begun the better. For sixty days after operation he injects daily ½ gr. (0.03 gm.) of a soluble iron salt, and 1/24 gr. (0.002) of arsenous acid. Every ten days he gives subcutaneously 2½ gr. (0.16 gm.) mercury salicylate subcutaneously, until 10 grains have been administered. Then ½ or 1 gr. (0.03-.06 gm.) every fifteen or twenty days for the first year. The second year he gives a series of 1 grain doses until 10 grains have been taken, and then ½ grain every month. Lately he has used the succinimide of

mercury subcutaneously in 1/5 grain (0.012 gm.) doses. Iron and arsenic injections are given from time to time, and are found very invigorating.

6. **Autoprotective Mechanism.**—Sajous adduces evidence, physiologic and zoologic, which leads him to the following conclusions:

1. Man, in keeping with *many animals lower in the* phylogenetic scale, is supplied with an autoprotective mechanism.
2. This mechanism includes: (a) the immunizing center, an organ of special sense annexed to the heat center, both centers being located in the pituitary body; (b) the thyreoparathyroid glands; (c) *the adrenals, and* (d) *special nerves* which connect the immunizing center (through the heat center) with these two sets of organs.
3. The immunizing center, which governs the autoprotective mechanism, is the developed "osphradium" or "test organ" de*scribed by zoologists in molluscs and certain* ancestral vertebrates.
4. While the osphradium of primitive animals tests their respiratory fluid, sea water, its prototype, the immunizing center of higher animals, including man, tests the blood, also a respiratory fluid and a qualitative homologue of sea water.
5. *When the functional activity* of the immunizing center is increased through the presence in the blood of some toxin, i. e., wastes, toxins or endotoxins, mineral and vegetable poisons, certain venoms, drugs, etc., capable of exciting this center, it stimulates correspondingly the heat center and thus awakens the immunizing process.
6. Fever indicates that the autoprotective mechanism is active. The rise of temperature is due to the increased production of thyreoparathyroid and adrenal secretions and the resultant increment of metabolic activity. The immunizing process is a consequence *of this hypermetabolism, all* the immunizing agents, plasmatic and cellular, being produced in greater quantities.
7. Absence of fever in a toxemia of any kind is due to inability of the immunizing center to react under the influence of the toxic, owing to deficient sensitiveness (inherited or acquired) of this center, or *to the fact that the toxic is itself* a paralyzant or anesthetic of its sensory elements.
8. Excess of fever (above 105.5 F.) is due to excessive excitation of the immunizing center and a corresponding overproduction of defensive bodies. This condition exposes the red corpuscles and *the endothelial cells to proteolytic destruction* (hemolysis and autolysis) along with the pathogenic substances or bacteria.

Medical Record, New York

February 27

9 Claims of Water as a Therapeutic Agent. S. Baruch, New York.
10 Coagulability of the Blood in Pulmonary Tuberculosis. M. Solis-Cohen, Philadelphia, Pa.
11 *Treatment of Patients with *Hemiplegia from* Cerebral Apoplexy. W. M. Leszynsky, New York.
12 Tuberculosis of the Breast. E. St. Jacques, Montreal, Can.
13 Achylia Gastrica versus Insufficientia Pylori. M. I. Knapp, New York.

11. **Cerebral Apoplexy.**—Leszynsky says that cerebral apoplexy is often the first intimation of an unsuspected chronic nephritis associated with arteriosclerosis. Syphilis is another cause, especially in persons under 35. Other causes are embolic softening, meningeal hemorrhage, tumor formation involving the motor tract, and unilateral lesion in the other cervical region of the spinal cord or cranial traumatism. Hemorrhage may occur anywhere in the brain, but is more common from the lenticulo striate arteries in which miliary aneurisms are apt to develop. Hemorrhage *from arterial* thrombosis is, in the author's experience, quite as frequent as that due to hemorrhage. Most of the symptoms described in text-books as preliminary to cerebral hemorrhage, are in reality the accompaniment of endarteritis. The exciting causes are excessive emotion, a cold bath, *temporary* obstruction to the returned circulation from the brain through violent coughing, sneezing, straining at stool, etc. When apoplexy *occurs suddenly* without *loss of consciousness*, paralysis is evident. But during coma the diagnosis is frequently difficult. While the patient remains *unconscious* the prognosis for life is doubtful and death usually occurs if coma continues more than twenty-four hours. Treatment is based on as little disturbance as possible, the patient being in bed with head and chest raised. To relieve stertor turn the body on the paralyzed side and draw the *tongue forward*. A positive diagnosis should precede treatment. Venesection is indicated with high blood pressure, but not with a small weak frequent pulse and pale face. It is preferable to operate on the non-paralyzed side. An exact differentiation between apoplexy from hemorrhage and *from* thrombosis or embolism being often impossible, venesection should not be practiced in doubtful cases. Tincture of aconite, two or three drops every half hour, will also lower arterial pressure, but more slowly, or a ligature about the extremities close to the trunk may prove useful. The physician should always satisfy himself by personal observation whether the patient is able to swallow, *and not take it on trust* from anyone else. Even if the individual can swallow, food should not be forced. If necessary rectal feeding may be resorted to. The author discusses the treatment at considerable length.

Boston Medical and Surgical Journal

February 25

14 *Cancer of the Uterus. E. B.* Young and J. T. Williams, Boston.
15 *Anterior Metatarsalgia: Its Causes and Its Relief. N. Allison, St. Louis.
16 Nerve Strain in School Children. L. W. Flanders, Dover, N. H.
17 *Ethyl Chlorid in General Anesthesia.* A. M. Dodge, Boston.

15. **Anterior Metatarsalgia.**—Allison describes the nature and causation of this condition, and says that it is often associated with a high degree of neurasthenia. He recommends a treatment consisting of support and developmental exercises, and describes an appliance which is light, durable, gives firm support where it is needed, and remains constantly in the right spot.

Lancet-Clinic, Cincinnati, Ohio

February 27

18 Cerebral Rheumatism. H. H. Hoppe, Cincinnati.
19 A New Field of Practice in Spirit and Drug Neurosis. T. D. Crothers, Hartford, Conn.
20 Blindness Caused by Ophthalmia Neonatorum. W. S. Keller, Cincinnati.

Medical Fortnightly, St. Louis

February 25

21 Diabetes Mellitus. J. V. Shoemaker, Philadelphia.
22 Treatment of Acute Otitis Media. L. D. Brose, Evansville, Ind.
23 True Basis for Reconstructed Medical Science. J. Clements, Wichita, Kan.

Northwestern Lancet, Minneapolis

February

24 *Accidents and Complications in Goiter Operations. C. H. Mayo, Rochester.
25 Anatomic Treatment of Fracture of the Neck of the Femur After the *Method of Maxwell and Ruth. A. Shimonek*, St. Paul.
26 What Can Our Association Accomplish in Business, Educational, Moral and Social Matters? R. G. Warne, Mitchell, S. D.
27 *Lateral Curvature of the Spine: Early and* Late Cases. A. J. Gillette, St. Paul.
28 A Test for Albumin in the Urine. H. L. Ulrich, Minneapolis
29 Beck's Bismuth Paste Treatment, with Report of Nine Cases. E. C. Robitshek, Minneapolis.
30 *Xeroderma. G. P. Crume*, Minneapolis.
31 Morbid Anatomy of the Heart. H. A. Tomlinson, St. Peter, Minn.

24. **Accidents and Complications in Goiter Operations.**—Mayo finds that hemorrhage, with its immediate and secondary consequences, is a serious accident. When secondary, it is usually from muscle inclusion in ligating the inferior thyroid artery. There were 4 deaths in 575 operations for diffuse or encapsulated adenomata, 2 occurring from pneumonia. Seven out of 19 deaths in 410 cases of hyperthyroidism occurred in the first 46 operations for this disease. In this condition the complications of degenerative conditions lead to hyperthyroidism after operation. Preparation, graduated operation, and better technic have reduced this mortality to 4 or 5 per cent. Preservation of the posterior gland capsule tends to preserve the recurrent laryngeal nerves, also the parathyroid bodies. The greatest danger of parathyroid injury is in secondary operations for goiter. Other serious conditions requiring operation which occur with marked Graves' disease may call for preparation or graduated operation as a preliminary procedure.

Virginia Medical Semi-Monthly, Richmond

February 12

32 Recent Advances in Physiology. T. Hough, Charlottesville.
33 The Bronchoscope in the Diagnosis and *Treatment of* Disease. R. H. Johnston, Baltimore.
34 *Points in Morbid Psychology. F. Peterson, New York.
35 Intestinal Diseases Due to Metazoan Parasites. W. G. Hopkins, Richmond.
36 Fetus Removed from the Abdominal Cavity After Three Years' Standing. E. R. Hart, Suffolk.
37 Suturing in *Trachelorrhaphy.* J. W. Henson, Richmond.
38 Stricture of the Female Urethra. C. W. Astrop, Surry.
39 Treatment of Incipient Tuberculosis. W. H. Bramblitt, Pulaski.

34. Abstracted in The Journal, Nov. 7, 1908, p. 1625.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

February

40 Evolution in the History and Treatment of Uterine Fibroids A. Vanderveer, Albany, N. Y.
41 Plea for the More Frequent Performance of Cesarean Section L. M Allen, Baltimore
42 *Best Methods of Promptly Terminating the First Stage of Labor, with Special Reference to Vaginal Cesarean Section H D Fry, Washington, D C
43 *An Analysis of Eighty Consecutive Cases of Extrauterine Pregnancy. R T Frank, New York City
44 Prophylactic Treatment of the Physical Results of Surgical Diseases C M Rakestraw, Savannah, Ga
45 Causes of Death of the Viable Fetus Before Labor F A Dorman, New York
46 Fetal Mortality During Labor: Its Causes and Prevention S Marx, New York
47 Unusual Results Following Cholecystotomy. E W. Hedges, Plainfield, N J
48 Abdominal Surgery in the Aged I. G Sherrill, Louisville, Ky
49 *Abdominal Surgery Without Detached Pads or Sponges (Concluded) H S Crossen, St Louis
50 Infantile Mortality in Early Life A Brothers, New York
51 Relation of Cyclical Vomiting in Children to Appendicitis. C. G. Cumston, Boston, Mass

42. **Termination of First Stage of Labor.**—Fry declares that when dangerous complications threaten or have developed, the safety of the mother demands prompt evacuation of the uterus In multiparæ, or in primiparæ after obliteration of the cervix, manual dilatation accomplishes the result satisfactorily; but on the other hand, with a rigid or intact cervix to deal with, *accouchement forcé* is a serious undertaking. Besides the risk of infection and deep lacerations of the mother's soft parts, her life would be jeopardized by failure to secure prompt delivery in the face of some complication, such as eclampsia or accidental hemorrhage When prompt or rapid evacuation of the uterus is indicated in the interests of mother or infant, one can now choose between manual dilatation, multiple incisions of the cervix, the Bossi or some instrument dilator, and vaginal Cesarean section. In dilatation, two things must be borne in mind: (1) The obliteration of the cervical canal; (2) the dilatation of the external os The method employed to complete artificially the first stage of labor must be selected in accordance with one or the other of these conditions As a rule, manual dilatation and multiple cervical incisions are applicable only after obliteration of the canal; while instrumental dilatation and vaginal Cesarean section are required when the cervix is intact.

43 **Extrauterine Pregnancy.**—Frank analyzes 80 consecutive cases of extrauterine pregnancy at the Mount Sinai Hospital, the first thirty of which were reported by Brickner in 1905. In the entire series only 12 women had never been previously pregnant, and of these 6 had been married less than one year Ten had had no pregnancy for more than 4 years preceding their present illness (12.5 per cent), while 6 (7.5 per cent) acquired their ectopic gestation during the first six months of marriage. In one case, the tubal pregnancy followed three months after normal labor, in two cases within four months of early abortion One patient of the series was simultaneously pregnant in the tube and in the uterus. The menstrual history, pain, temperature, pulse, local signs and blood changes are discussed in detail All but three of the patients were operated on, and in these three there were typical hematoceles In the series there were ruptures, 42 (right 21, left 21); abortions, 20 (right 12, left 8); hematoceles, 11; unruptured 4, intraligamentous rupture, 1; abdominal, 1; and ectopic with extrauterine pregnancy, 1. Immediate operation was done in 24 cases, 31.2 *per cent.*; deferred operation in 53 cases, 69.8 per cent. In the three patients with hematocele, treated without operation, the tumor was firmly encapsulated when first seen; in each case it was of moderate size, and caused no symptoms These three patients eventually regained their health, but the period of confinement to bed was longer than if they had been operated on There were three deaths in the entire series, a mortality of 2.75 per cent. From his study of this series of cases, Frank reaches the following conclusions.

1 Before all else, the diagnosis must be assured Patients who give a history suspicious of ectopic pregnancy—spotting cramp like pains, fainting, collapse, with or without some of the less certain signs, such as amenorrhea, the accessory symptoms of pregnancy (morning vomiting, increase in size of the breasts, etc) and in which the uterus does not show the shape and size corresponding to their supposed period of gravidity, or who have a mass near the uterus, should be consigned to a hospital, or should be kept under the closest observation at their homes

2 Such patients should never be subjected to forcible examinations, nor should they be curetted, until every possibility of ectopic pregnancy has been definitely excluded

3 If after two or three days of observation the condition has not definitely improved, and no marked tendency to hematocele formation has developed, laparotomy is indicated. Should severe attacks of pain, fainting or collapse ensue during the period of waiting, operate at once When a hematocele is still small or ill defined, laparotomy will shorten the period of convalescence. In well defined hematoceles, vaginal section for evacuation and drainage suffices

4 If a patient when first seen is in a precarious condition, it is safer to err on the side of early operation than to wait

5 When a patient is seen in extreme collapse, immediate rapid laparotomy, with subsequent measures to combat both the hemorrhage and the shock, is indicated.

That inexperienced diagnosticians are deceived and fail to distinguish between transitory primary shock and really grave hemorrhage is doubtless true, but Frank would prefer to interfere unnecessarily early rather than too late.

49. Abstracted in The Journal, Dec. 17, 1908, p. 1355.

Journal of the Arkansas Medical Society, Little Rock

January

52 *Diagnosis of Pelvic Disease and Treatment of Inflammatory and Suppurative Conditions J Price, Philadelphia
53 Pathologic Tonsil and Its Surgical Treatment M Duckworth, Pine Bluff
54 *Appendicostomy in Amebic Dysentery. O. Gray, Little Rock

52 and 54. Abstracted in The Journal, July 18, 1908, pp. 249, 250.

Buffalo Medical Journal

February

55 *Prolonged and Tedious Labors and Forceps Deliveries Compared as Causes of Epilepsy, Idiocy and Cerebral Diplegias J W Putnam, Buffalo
56 Diet in Typhoid L H Levy, Syracuse, N. Y.
57 Some Essentials of Preventive Medicine. I. M. Slingerland, Fayettsville, N Y

55 **Labor and Epilepsy, Etc.**—Putnam reviews the literature with reference to the relation of various mental conditions to prolonged and tedious forceps deliveries. The obstetrician has a more important function than merely bringing a live child into the world. He should so perfect himself in the science of obstetrics that the preventable deformity, idiocies, and epilepsies should be reduced. There are in the United States over 95,000 idiots and more than 123.000 epileptics. Many of these are so afflicted from preventable accidents of birth; in fact, the author claims to have shown by the writings of eminent men in Europe and the United States, that idiocy, epilepsy and cerebral palsies of childhood are due to one of three causes, asphyxia, injuries to the head from forceps, and injuries from prolonged compression.

American Journal of Physiology, Boston

January

58 *The Inhibitory Effect of Magnesium on Some of the Toxic Effects of Eserin D R Joseph, New York
59 *Prolonged Existence of Adrenalin in the Blood D. E Jackson, Bloomington, Ind
60 *Rôle c[illegible] us in the Nutrition of Animals E B [illegible] m and J G Fuller, Madison, Wis
61 *Cause [illegible] Produced by Asphyxia J. J. R Macleod, Cleveland, Ohio
62 *Absorption, Excretion and Destruction of Strophanthin. R A Hatcher, New York
63 Elimination of Total Nitrogen Urea and Ammonia Following the Administration of Glycocoll, Asparagin and Glycylglycin-Anhydrid P A Levene and P A Kober, New York.

58. **Inhibitory Effect of Magnesium.**—*Joseph's* experiments show that magnesium salts abolish the tremor caused by eserin, and are of some value as antidotes in eserin poisoning, but have no influence whatever on eserin meiosis.

59. **Persistence of Adrenalin in the Blood.**—Jackson shows that adrenalin does not persist in the blood after its visible effects in the rise *of* blood pressure have disappeared, but that the rise of pressure produced in a second dog by the transfusion of blood from a dog injected with adrenalin, when the blood is drawn after the effects of the adrenalin have disappeared, is of a different character from that produced by adrenalin, and depends on some other cause than the presence of adrenalin in the blood In the dog the adrenalin disappears from the blood in about one minute's time.

60. **Inorganic Phosphorus in Nutrition.**—Hart, McCollum and Fuller found, by keeping pigs on a ration containing very

little phosphorus, that the organism, when starving for phosphorus, abstracts calcium and phosphorus from the bony skeleton in the proportions found in tri-calcium phosphate, and evidently possesses the power to recombine these elements in the organic forms of phosphorus needed in the nervous system and other parts of the economy. Up to a certain weight, the animals receiving an insufficient supply of phosphorus throve and gained in weight, as well as did animals receiving an abundance of the element. When this weight was reached, loss of weight began, followed by collapse. If the insufficient supply of phosphorus in the diet were supplemented by added phosphorus no bad results occurred, and this deficit could be supplied as well by the inorganic phosphates like calcium phosphate, as by organic phosphates, such as phytin. The phosphorus in the organs of animals on the low phosphorus ration was maintained at a constant proportion, comparable to that of normally fed pigs, but the percentage of ash in the skeleton of such pigs was reduced to nearly one-half that of pigs receiving a normal ration or a phosphorus-poor ration supplemented by an inorganic phosphate.

61. **Experimental Glycosuria.**—Macleod shows that the glycosuria produced by asphyxia and by curare is due to the influence of carbon dioxid, and probably also of acids, in stimulating the liver cells to an increased formation of sugar from the liver glycogen. If the liver be excluded from the circulation the glycosuria disappears and the hyperglycemia is converted into hypoglycemia. The acids which may act on the liver cells probably owe their origin to the deficiency of oxygen in the blood. Curare produces most marked hyperglycemia, which is only partially prevented by careful artificial respiration and oxygen inhalations. The glycosuria produced by asphyxia does not pass off for some time after the cause of the asphyxia has been removed.

62. **Absorption of Strophanthin.**—Hatcher reaches the following conclusions: The absorption of strophanthin is very rapid when more than six times the fatal dose by vein is placed in the ligatured small intestine of the dog. The rapidity of absorption is dependent on the total amount injected into the alimentary canal to a far greater degree than on the total surface of intestine concerned in absorption. It is probable that the smaller the dose of strophanthin that is given by the mouth, the more nearly does excretion keep pace with absorption. This usually prevents toxic symptoms, unless an amount more than equal to five times the fatal dose by vein is given. If an amount equal to ten times the fatal dose by vein is administered, toxic symptoms result. If vomiting and diarrhea are prevented in such a case in the dog (morphin, ligature), death results as a rule. The absorption of strophanthin in man appears to follow a rule similar to that in the dog. Strophanthin is excreted rapidly into the intestine of the rat after being injected subcutaneously. It is excreted more slowly by the rat's kidney. While strophanthin may be destroyed to a limited extent in the alimentary canal, the rate of destruction in the stomach and small intestine of the dog is insufficient to account for the failure of these organs to absorb a toxic dose when moderately large amounts have been injected. Strophanthin can be extracted from the contents of the stomach and small intestine of the dog, and from the whole of the alimentary canal and the tissues of the rat, and the amount be determined by the physiologic test on cats. This test permits of the estimation of amounts of strophanthin which can not be determined by chemical means (one-tenth of a milligram), probably accurate to within about 10 per cent. The oral administration of strophanthin (and of strophanthus) in therapeutics is irrational in the present state of our knowledge concerning absorption and excretion in the alimentary canal, and destruction within the animal organism.

Cleveland Medical Journal

January

64 The Erie Street Medical College Sixty Years Ago. D. H. Beckwith, Cleveland.
65 Ethics of Specialism. R. E. Skeel, Cleveland.
66 Some Diseases of the Jaws, with Illustrative Cases. C. A. Hamann, Cleveland.
67 Peritonitis. C. Graefe, Sandusky, Ohio.

Southern Medical Journal, Nashville, Tenn.

January

68 *Early Diagnosis of Tuberculosis, with Special Reference to the Ocular Reaction of Wolff-Eisner-Calmette. A. E. Thayer, Jacksonville, Fla.
69 *Open-Air Treatment of Surgical Tuberculosis. De F. Willard, Philadelphia.
70 *Tuberculous Arthritis of the Hip Joint. S. H. Weeks, Portland, Me.
71 *Treatment of Tuberculous Hip Disease by Weight-Bearing and Fixation by the *Lorenz Short Hip Spica.* H. A. Wilson, Philadelphia.
72 *Vaccine Therapy in Hip Joint Tuberculosis. E. H. Ochsner, Chicago.
73 *Retroperitoneal Tuberculous Glands and Their Relation to Spinal Symptoms. C. F. Painter, Boston.

68. **Ocular Tuberculin Reaction.**—Thayer reviews the literature and concludes that in view of the non-specific character of the eye reaction and its possible dangers, it should not be used; and the skin reaction, if employed, should be considered as only one of the symptoms, to be given no exaggerated weight in making the diagnosis, and not to be trusted to the exclusion of other physical data.

69 and 73. Abstracted in The Journal, Oct. 17, 1908, p. 1363.

70. Abstracted in The Journal, Oct. 31, 1908, p. 1537.

71 and 72. Abstracted in The Journal, Nov. 7, 1908, p. 1625.

Journal of Ophthalmology and Oto-Laryngology, Chicago

January

74 Pre-Retinal Hemorrhage. C. S. G. Nagel, San Francisco.
75 New *Instrument of Use in Surgery of the Nose* and Throat. E. Pynchon, Chicago.
76 New Instrument for Paracentesis of Tympanic Membrane. V. A. Chapman, Muskegon, Mich.

Journal of the Kansas Medical Society, Kansas City

January

77 Insanity as the World Sees It. C. C. Goddard, Leavenworth, Kan.
78 Should the State *Maintain Sanatoria* for Tuberculous Patients? J. A. Milligan, Garnett, Kan.
79 *The Goat—Now Laugh. J. E. Minney, Topeka.
80 Treatment of Pneumonia. B. E. McShane, Alton, Kan.
81 Gumma of External Nose; Serous Cyst of the Iris. J. S. Weaver, Kansas City, Mo.
82 Stale Food Products. D. D. Haggard, Phillipsburg, Kan.
83 Hernia. S. Murdock, Sabetha, Kan.

79. **Goat's Milk.**—Minney discusses the use of goat's milk, and arrives at the following conclusions:

1. The goat is freer from disease than the cow, and particularly from tuberculosis, and hence goat's milk is more sanitary than that of the cow.
2. The milk is *more nearly* like human milk, in the minuteness of its fat globules, and the same in casein.
3. It is more easily digested than cow's milk, and hence is better for infants and invalids.
4. Goat's milk is economical and in reach of the poor, and there are few families that could not afford to keep one or two milk goats, thus solving the infant-food problem and helping to prevent the spread of tuberculosis.

Laryngoscope, St. Louis

January

84 *Relation of Faculty of Hearing to Faculty of Speech. G. Hudson-Makuen, Philadelphia.
85 Functional Paralysis of the Acoustic Nerve. F. G. Stubbs, Chicago.
86 Five Cases of *Thrombosis of Lateral Sinus,* with Recovery, Bearing on the Diagnosis and Prognosis of This Affection. H. Friedenwald, Baltimore.
87 Postgraduate Instruction in Otolaryngology. G. E. Shambaugh, Chicago.
88 Further Study of Laryngeal Neoplasms in America. J. L. Davis, Philadelphia.
89 Paralysis of Left Vocal Cord Caused by Peritracheal Tumor. W. E. Chenery, Boston.
90 Fatal Operative Case Showing Developmental Absence of Outer Sphenoidal Wall and in Its Place a Large Vein Communicating Directly with the Cavernous Sinus. *Autopsy.* E. O. Emerson, Boston.
91 Ozena, No Terra Incognita. J. Holinger, Chicago.
92 *Hyperkeratosis Linguæ* . R. H. Craig, Montreal, Canada.

84. Abstracted in Society Proceedings, The Journal, Oct. 24, 1908, p. 1456; also published in the *Pennsylvania Medical Journal*, January, 1909.

Old Dominion Journal of Medicine and Surgery, Richmond, Va.

January

93 *Hallucinations of the Insane. C. W. Burr, Philadelphia.
94 Toxic Sanity in *a Case of* Mastoiditis. F. P. Calhoun, Atlanta, Ga.

95 Phases of Tuberculosis Important to the Public. C. T. St. Clair, Tazewell, Va.
96 Treatment of Cancer. H. B. Stone, Charlottesville, Va.
97 Hernia and Its Treatment. M. Willis, Richmond, Va.
98 Herpes Gestationis: Report of a Case. C. J. Andrews, Norfolk, Va.
99 Extrauterine Pregnancy. S. Lile, Lynchburg, Va.
100 Extrauterine Pregnancy—The Deferred Operation. E. T. Hargrave, Norfolk, Va.

93. **Hallucinations of the Insane.**—Burr enumerates the various forms of hallucination encountered in the insane and briefly describes each. He states that the question sometimes arises: Is a person alleged to be insane and with hallucinations really ill or malingering? There is no short and easy way to determine the matter. If a man says that he hears voices or sees spirits, it is impossible to disprove his statements, but clinically we know that there are always other symptoms associated with hallucinations in the insane, and the diagnosis of fraud or illness must depend on the presence or absence of these symptoms. In other words, the question to be answered is: Do the patient's conduct, manner and behavior correspond with those of persons suffering from hallucinations?

Military Surgeon, Richmond

January

101 Military Sanitary Problems in the Philippine Islands. L. M. Maus, U. S. Army.
102 Battleship Neurasthenia. S. G. Evans, U. S. Army.
103 Hygienic Maxims for the Soldier in Camp and Field. J. K. Weaver, National Guard, Pa.
104 Medical Versus Surgical Treatment of Amebic Dysentery. J. M. Holt, Brooklyn, N. Y.
105 Dry Earth Closets for Field Use. G. F. Campbell, U. S. Army.

American Medicine, Burlington, Vt.

January

106 Latent Malignant Disease of the Stomach. H. Stern, New York.
107 Abuse of Medical Charity and a Remedy. M. O. Magid, New York.
108 *When Shall We Operate for Intra-Abdominal Hemorrhage Due to Tubal Pregnancy. M. Rabinovitz, New York.
109 Is Food Containing Sulphites Injurious to Health? E. E. Smith, New York.
110 Question of a Relationship Between "Syphilitic" Llamas, of the Department of Puno, Peru, and Pre-Columbian Syphilis in Man. A. S. Ashmead, New York.
111 Unusual Seat of Angioneurotic Edema. A. Gordon, Philadelphia.
112 Diagnosis and Treatment of Toxemias of Pregnancy. W. H. Kahrs, New York.

108. **Operation for Intra-abdominal Hemorrhage in Tubal Pregnancy.**—Rabinovitz discusses this subject and insists that in all cases of internal hemorrhage due to ruptured tubal pregnancy or abortion, operation should be done immediately, quickly and thoroughly.

Washington Medical Annals

January

113 Journalistic Suggestions for Medical Writers. L. Eliot, Washington.
114 Eczema in Children. T. N. McLaughlin, Washington.
115 Gallstones; Analysis of Sixty-one Cases. D. S. Lamb, Washington.
116 Tuberculous Obstruction of the Bowel. J. R. Wellington, Washington.
117 Staphylococcus Cystitis with Report of a Case Due to *Staphylococcus Pyogenes Albus* Associated with *Staphylococcus Citreus*. W. M. Barton and R. A. Hamilton, Washington.
118 *Evils of High Board Fences in Relation to Clean Back Yards. W. H. Atkinson, Washington.

118. **Board Fences and Back Yards.**—Atkinson, in writing about the board fences which enclose the back yards of so many houses in Washington, condemns them on esthetic, sanitary and bacteriologic grounds. He would do away with back-yard fences altogether, but if protection is needed it should be of iron or wire. These do *not decay*, with foul odor and slimy moss. Iron rust is not unhealthy; properly constructed, an iron fence is strong and durable, hides no criminal, covers up no filth, shuts out but a thread of sunshine, leaves an abundance of space for free circulation of air, and prevents eddies of dead and foul air. All these properties stimulate the growth of a vigorous and healthy vegetation. Atkinson therefore appeals to the commissioners and their building inspectors that all fences shall be of iron or wire, with iron posts and concrete base; all back steps of the same material; walks of concrete; and that all out-houses and sheds be built of iron sheeting, brick, stone, terra cotta or concrete, and that each shed or out-house be detached.

American Journal of Public Hygiene, Boston

November

119 *National Department of Public Health. R. H. Lewis, Raleigh, N. C.
120 Improvement of the Municipal Sanitary Inspection Service. H. Mitchell, Asbury Park, N. J.
121 The Rural Health Officer. C. A. Hodgetts, Toronto, Ont.

119. Abstracted in The Journal, Sept. 12, 1908, p. 940.

New Orleans Medical and Surgical Journal

January

122 *Malarial Blindness: With Report of Six Cases. T. S. Davis, Blooming Grove, Tex.
123 Low Tracheotomy for Foreign Bodies in the Trachea and Esophageal Conditions Resembling Tracheal Obstruction. J. D. Bloom, New Orleans.
124 Multiple Pregnancy, History and Treatment of Unusual Termination. E. S. Matthews, Bunkie, La.
125 Traumatic Tetanus. E. M. Dupaquier, New Orleans.
126 Skin Diseases of the Human Race Carried or Transmitted by Insects. M. C. Brady, New Orleans.
127 Arteriovenous Aneurism of Profunda Femoris, Operation by Matas Method. H. B. Gessner, New Orleans.
128 Demonstration of Advantages of Surgical Engine in Bone Work. W. M. Perkins, New Orleans.
129 Case of Volkmann's Ischemic Paralysis. C. W. Allen, New Orleans.
130 Loewy's Test for Insufficiency of the Pancreas. J. A. Storck, New Orleans.
131 Otogenous Intracranial Complications in Children. H. Dupuy, New Orleans.
132 *Spinal Analgesia in Genitourinary and Rectal Surgery. C. Chassaignac, New Orleans.
133 *Arteriosclerosis and Nephritis. F. Watson, New Orleans.
134 Treatment of Nephritis. J. B. Elliott, New Orleans.
135 Nervous and Mental Symptoms of Nephritis. R. M. Van Wart, New Orleans.

122. **Malarial Blindness.**—Davis says that the estivo-autumnal parasite is the one which produces malarial blindness, and its tertian form is the one most frequently present. It is not necessary for the malarial cachexia to exist for the blindness to occur. The blindness may be *transient* and disappear as the fever goes down, or it may become permanent through atrophy of the optic nerve. The blindness may be produced by an optic neuritis, a retinal hemorrhage, hemorrhage into the vitreous, effusion into the vitreous or by a retinochorioiditis. The diagnosis is rapidly made by blood examination and the ophthalmoscope. The condition is really *differentiated* from quinin amaurosis by the fact that in the latter there is grave ischemia, while in the malarial affection there is great congestion of the papilla. The *prognosis* is good. Quinin is best given hypodermatically.

132. **Spinal Analgesia.**—Chassaignac, after four years' additional observation and 650 cases, repeats his conclusions of 1904 that spinal analgesia will neither displace any other method nor die out. It has its proper place, and its own indications and contraindications.

133. **Arteriosclerosis and Nephritis.**—Watson's observations lead him to conclude that a patient, giving the history of one or more of the etiologic factors of arteriosclerosis, who presents on physical examination a hypertrophy of the heart—heart sounds loud and clear at apex and base and an accentuated ringing aortic sound, thickened radial, brachial and temporal arteries, high tension pulse, normal or diminished amount of highly colored urine of normal or high specific gravity, with a variable amount of albumin and with or without hyalin casts—is suffering from a condition primarily arterial, to which the kidney changes are secondary. This is by far the most common *clinical* picture, according to his observation. The diagnosis should be arteriosclerosis—the prognosis being based on the cardiovascular system: The albumin is no more than an indication that the arteries and glomeruli of the kidney are affected in the general change. The patient if seen early can be greatly helped—can be given years of comfort. The prognosis is much better than for primary chronic interstitial nephritis. The latter condition would show a large amount of pale urine of low specific gravity, a variable amount of albumin and hyalin—possibly granular—casts, and on physical examination a hypertrophied heart, with more or less thickening of the arteries, greatly increased blood pressure and albuminuric retinitis. In the later stages the two conditions are approximately the same

clinically and can be differentiated only on the early history. Here, however, the separation of the conditions is not important for either prognostic or therapeutic reasons.

New York State Journal of Medicine, New York

January

136 Diagnosis of Certain Chronic Abdominal Conditions. W. C. Wood, Brooklyn.
137 *Intermittent Claudication. H. C. Gordinier, New York.
138 Technic of Skin Grafting. E. MacD. Stanton, Schenectady.
139 Chylous Ascites in an Infant Sixteen Days Old. Le G. Kerr, Brooklyn.
140 Artificial Hyperemia in Pulmonary Tuberculosis, with Special Reference to the Kuhn Mask. F. E. Beal, New York.

137. **Intermittent Claudication.**—Gordinier discusses the etiology and pathology of this condition. He says that there are five clinical characteristics which stamp intermittent claudication as a perfect clinical entity and which also serve to make the diagnosis of it very clear. In order of their import, they are as follows: (1) The intermittent character of the symptoms; (2) the absence of the symptoms while the limbs are at rest; (3) the development of painful limping on exertion; (4) the disappearance of all symptoms after a period of rest, to be repeated again on extension; (5) the absence in most cases, especially during the attack, of pulsation of the posterior tibial and dorsalis pedis arteries. The prognosis is usually unfavorable, though some cases improve. He sums up the treatment as follows: Restriction of exercise short of bringing on the attack, or absolute rest in bed; saline baths, gentle massage and electricity, particularly the D'Arsonval current, which relieves pain and produces vasomotor dilatation; vasomotor dilators, especially nitroglycerin and sodium nitrite, together with small doses of potassium or sodium nitrite and general tonics, particularly the glycerophosphates, arsenic and strychnin. Tobacco and alcoholic stimulants should be prohibited. The condition of flatfoot should be carefully corrected; if a syphilitic infection is suspected a systematic and thorough course of mercury and the iodids should be given.

Atlanta Journal Record of Medicine

January

141 Results of Vaccine Therapy in Acute and Chronic Infections. J. E. Paullin, Atlanta, Ga.
142 Complications of Gonorrhea in Women. F. G. Hodgson, Atlanta, Ga.
143 Tuberculosis. G. Brown, Atlanta, Ga.
144 Adenoids. R. B. Ridley, Atlanta, Ga.
145 Hunger and Thirst, and Some More of That Sort. C. A. F. Lindmore, Atlanta, Ga.

University of Pennsylvania Medical Bulletin, Philadelphia

February

146 Two Cases of Relapsing Fever. J. W. Hunter and T. A. Cope, Philadelphia.
147 The Occurrence of a Ciliate (Opalinopsis Nucleobata, N. S.) in the Liver of a Mammal (Canis Latrans). A. J. Smith and H. Fox, Philadelphia.
148 *The Standardization of Ergot. H. C. Wood and C. A. Hofer, Philadelphia.
149 Pseudodiphtheritic Septicemia, with Report of a Case Diagnosticated by Blood Culture. G. I. MacLeod and F. H. Klaer, Philadelphia.

148. **Standardization of Ergot.**—Wood and Hofer describe a simple method for estimating the comparative power of different specimens of ergot, and discuss the value of the circulatory changes as an indicator of the quality of ergot. They describe the results of a number of tests of fluid extracts of ergot obtained from representative manufacturers, with the result that only two out of eleven samples were found to be active. The authors point out the mistake of the general idea that fluid extract of ergot is a stable preparation; in point of fact it deteriorates very rapidly.

Maryland Medical Journal, Baltimore

February

150 Some Esophageal Cases. R. H. Johnston, Baltimore.
151 Physiologic and Therapeutic Influence of the Mind on the Body. W. E. Magruder, Sandy Spring, Md.

Journal of Nervous and Mental Diseases, New York

February

152 *Facial Paralysis: A Study of 335 Cases. G. A. Waterman, Boston, Mass.
153 *Course of Sensory Impulses in the Spinal Cord. C. D. Camp, Ann Arbor, Mich.

152 and 153. Abstracted in The Journal, July 11, 1908, pp. 163, 164.

Louisville Monthly Journal of Medicine and Surgery

February

154 *Causation and Treatment of Infantile Convulsions. E. W. Saunders, St. Louis.
155 Case Reports: Calculus of Kidney; Pyonephrosis. L. Frank, Louisville.
156 Weak Feet. J. B. Richardson, Louisville, Ky.

154. Published in the *Interstate Medical Journal*, January, 1909, and the *Lancet-Clinic* for Feb. 6, 1909; abstracted in The Journal, Feb. 27, 1909, p. 731.

Mississippi Medical Monthly, Vicksburg

February

157 Bright's Disease. S. W. Glass, Dublin, Miss.
158 Honesty. C. M. Shaw, Robinsonville, Miss.
159 *Conservative Use of Forceps: Indications and Contraindications. J. A. Rowan, Wesson, Miss.

159. **The Forceps.**—Rowan aptly contrasts the extreme practices of the dilatory "Dr. Lookwise" and the officious "Dr. Smart Alec," and then lays down clearly the rational *indications* for the use of the forceps. The physician should first be thoroughly satisfied that the woman is unable by her own natural forces to effect the expulsion of the child. In the second place, he should be satisfied with the existence of some condition involving the danger to either mother or child, unless delivery is rapidly accomplished. Those affecting the mother are eclampsia, actual or threatened, inadequately compensated heart lesion, hemorrhage from premature separation of the placenta, acute edema of the lungs, and exhaustion. Of this last condition the physician must be his own judge. Patients and friends will often insist on exhaustion, when the woman has strength enough to deliver three or four babies. The feebleness of the pulse is the best indication. Regarding the child, premature separation of the placenta, prolapse of the umbilical cord, undue pressure on the head, and a fetal heart beat below 100 or above 160 are indications. Among contraindications he mentions a hydrocephalic head and a decomposing fetus, in which cases the forceps is almost sure to slip and possibly injure the mother; and a perforated head, which can be better managed with a cephalotribe. Before applying the forceps it is well definitely to ascertain that the pelvic canal is not too small, and that there are no serious mechanical obstructions. Forceps should not be applied until the presenting part has become engaged.

Northwest Medicine, Seattle, Wash.

February

160 *Intestinal Putrefaction and its Relation to Indicanuria. R. W. Matson, Portland, Ore.
161 Examination of the Stool, and its Clinical Significance. N. W. Jones, Portland, Ore.
162 Injuries to the Eye and Adnexa. H. V. Wurdemann, Seattle, Wash.
163 Measurement of the X-Ray. H. Power, Spokane, Wash.
164 "Too Damned Good." W. W. Potter, Spokane, Wash.

160. Abstracted in The Journal, Nov. 7, 1908, p. 1636.

Bulletin Johns Hopkins Hospital, Baltimore

February

165 An Appendix Abscess in a 27-months' Child: with an Analysis of Infantile Appendicitis in the Johns Hopkins Hospital. J. W. Churchman, Baltimore.
166 *Relation of Bovine to Human Tuberculosis. W. L. Moss, Baltimore.
167 Dr. Adam Thomson, the Originator of the American Method of Inoculation for Smallpox. H. L. Smith, Baltimore.

166. **Relation of Bovine to Human Tuberculosis.**—Moss reviews this subject exhaustively both from the clinical and the autopsy point of view, and draws the following conclusions.

1. The clinical cases collected in this paper, in which the circumstantial evidence points more or less strongly to human beings having been infected with tuberculosis from bovine sources, can not be presented as furnishing absolute proof of the question, but they point so strongly to tuberculous cattle as a source of danger to man that, with such evidence alone before us, it would seem advisable to take strict precautions against bovine tuberculosis.

2. The economic losses among the cattle themselves, aside from any possible danger to man, are sufficiently great to demand a vigorous effort to stamp out bovine tuberculosis.

3. The evidence furnished at autopsy statistics of primary intestinal tuberculosis, reported by different observers, is very conflicting.

and, even if there were agreement on a high incidence, this evidence could only be taken as circumstantial, since there is abundant opportunity for primary intestinal infection to occur with tuberculous material of human origin.

4. The use of tuberculins from human and bovine bacilli has not yet thrown much light on the question. The agglutination reaction does not serve to differentiate the two types of bacilli.

5. It seems definitely established that there are two distinct types of tubercle bacilli; the human and the bovine type, which, in a majority of cases investigated, have characteristics sufficiently fixed so that mutation from one type into the other does not occur.

6. The bovine type of bacillus has been demonstrated in 20 per cent. of a series of 306 cases among human beings.

7. The bacillus which causes bovine tuberculosis may also cause tuberculosis in man. It must be borne in mind that every case of tuberculosis in man showing the bovine bacillus need not have received the infection directly from cattle, for it is easily conceivable that a human being having become infected from cattle may pass the infection on to other human beings.

8. The dangers from bovine tuberculosis to man are sufficiently great to warrant strict precautions against it.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

February 13

1 Signs of Early Disease of the Thyroid. G. R. Murray.
2 Nature and Treatment of Parenchymatous Goiter. F. L. Greaves.
3 Pulmonary Tuberculosis in Children. M. H. Williams.
4 *Iodin in Surgical Tuberculosis. W. A. Tatchell.
5 Control of Infectious Diseases In and Out of the Schools. A. D. Edwards.
6 *Medical Aspect of Dentistry and the Necessity of Dental Instruction for Medical Students. H. P. Pickerill.
7 *Feeding Trial in Relation to "Epidemic Enteritis." E. P. Minett.
8 *Can Opsonic Estimation Be Relied on in Practice? E. C. Hort.

4. **Iodin in Tuberculosis.**—Tatchell says that the most common disease in China is tuberculosis of joints, bones, glands and skin. He has found that after operative treatment the application of iodin liniment has a remarkable effect, and he selects one case of excision of the elbow as an illustration. After operating or scraping, the cavity is thoroughly swabbed with iodin liniment (B. P.). A piece of absorbent cotton twisted around the end of a probe forms a good swab, and can be graduated according to the size of the sinus. The liniment is applied every day. The application does not cause pain, except a momentary sensation when applied to some surfaces; neither does it destroy tissues, as does pure carbolic acid. Granulations do not become excessive. At the first application he inserts a thin piece of gauze or packs lightly, but never at subsequent dressings. Gauze plugs and strips for drainage have undoubtedly been responsible for many chronic sinuses. From the first he gives a mixture internally containing syrup of iodid of iron, 1 dram, and potassium iodid, 5 grains, three times a day.

6. **Dentistry.**—Pickerill discusses the various lesions due to reflex irritation of the teeth—epilepsy, neuralgia, spurious tetanus, cardiac irregularity, the association of dental with pelvic troubles and ear and eye disorders, local cellulitis, and various growths, etc. He discusses the bacteriology of the teeth, and says that in the past, both in dentistry and medicine, there has been too great a tendency to regard the teeth as isolated parts of an organism, existing of themselves and for themselves. Efficient mastication is the best stimulus for gastric and salivary secretion, and it depends on the absence of dental caries. It must be recognized that the teeth are an integral and inseparable part of the alimentary system, physiologically and pathologically. Abdominal surgeons are complaining of a something at work lowering the resistance of the alimentary tract, and this "something," Pickerill holds, is to be found in the enormous strain thrown on it by the constant ingestion of improperly masticated food, incorporated with more or less virulent organisms, toxins and pus from diseased teeth, and also because of the avoidance of hard food, in part secondary to the tenderness of the diseased teeth. The intestines become atonic, having to deal only with non-fibrous, easily digestible substances, and thus become an easy prey to micro-organisms. Dental caries is largely due to errors of diet commencing before birth and extending over the first twelve years of a child's life. Pickerill would have the medical student have a knowledge of what diet is beneficial and what deleterious to the teeth; for what is best for the teeth is best for the rest of the alimentary system. The physician should be able to write prescriptions for mouth washes, dentifrices, etc., suited to various conditions of the mouth, and to instruct parents in the care of children's teeth. He should know the value of a tooth—when it can be safely lost and when it must be saved; the mere extraction of one tooth will often ruin a patient's articulation. He should be able to recognize the difference between dental myelitis, periodontitis and alveolar abscess, and to relieve the pain of each of them without extracting, should this be necessary. In fact, every medical student should have some dental training, and Pickerill would like to see the converse true, namely, that every dentist should possess a medical qualification. A physician should also recognize the effect of measles, scarlet fever, rickets and syphilis on the teeth, and should know something of the treatment of fractures of the jaws by interdental methods.

7. **"Epidemic Enteritis."**—Minett describes a process of preparing dried milk and a trial of its use during the summer season among infants collected from the out-patient departments of Guy's Hospital, the Royal Waterloo Hospital for Children, and the Surrey Dispensary. The trial lasted nineteen weeks, during which 38 infants were supplied with the food gratis, and fed solely on it. Of the 5 cases of diarrhea that occurred, 2 children were already suffering from it when first seen; 2 cases occurred when the infants had run out of food, and for various reasons were fed with other products. One case occurred in an infant fed on dried milk solely from start to finish; it lasted only two days, and no organisms usually associated with epidemic enteritis could be demonstrated. The author is of opinion that dried milk is deserving a further trial during the summer months.

8. **Opsonic Estimation.**—After an extensive trial of over three years of the opsonic index for diagnosis, prognosis and treatment in tuberculosis, Hort can not regard it as a safe guide, he asserts, even when estimated by acknowledged masters of the opsonic art. He reports a series of observations in support of this view.

Lancet, London

February 13

9 *Psychology and Psychogenesis of Hysteria and the Rôle of the Sympathetic System. T. D. Savill.
10 *Clinical Value of Hemomanometer Observations. W. Russell.
11 *Etiology of Beriberi. H. Fraser and A. T. Stanton.
12 Interesting Case of Multiple Retroperitoneal Hydatid Cysts. F. C. Madden.
13 Anatomic Varieties and Their Bearing on the Treatment of Pathologic Conditions of the Palatine Tonsils. G. S. Hett.
14 Etiology of the Psoriatic and Allied Conditions. M. J. Chevers.
15 Transposition of Viscera Occurring in Brothers. L. Lowenthal.
16 Spontaneous Pulsating Exophthalmos. B. Hird and W. F. Haslam.
17 An Unusual Case of Appendicitis. F. J. Smith.
18 A Case of "Leather Bottle" Stomach. J. L. Stretton.
19 Food of Elementary School Children. A. H. Gerrard.

9. **Hysteria.**—Savill discusses the psychology of hysteria under the following headings: (1) The attributes of the hysterical mind; (2) the psychogenic explanation of hysterical disorders put forward by several eminent psychologists; (3) the rôle of psychogenesis in hysterical disorders and its limitations; (4) the rôle of the sympathetic system. Freud's view as to the almost universality of an underlying sexual basis does not accord with Savill's experience, now somewhat considerable, of these neuroses. He has seen scores of neurasthenics and hysterics whose sexual life history and constitution were absolutely normal. In any case he regards it as hazardous, harmful and wholly unjustifiable for any medical person, and particularly for one of the opposite sex, to make investigations into the dead memories of a sexual past and to call them into a state of activity. As to the various hypotheses explanatory of hysteria, he fails to see how any single explanation or hypothesis, whether psychic, physical or vasomotor, can apply to all the varied and manifold manifestations of hysteria. He is convinced, however, that the supreme importance of the rôle played by the vasomotor sys-

tem has been overlooked, and that in the majority of cases the hysterical lesion is vasomotor.

10. **The Hemomanometer.**—Russell discusses the nature of the arterial movements, and insists on the following factor, which he holds has been practically overlooked, that the arteries contract and relax in response to the composition of the blood—that is, to the direct influence on the vessel wall of various substances present in the blood. We know this to be the case with certain drugs, and it is only a reasonable inference that other contents of the blood have a like effect. He describes Oliver's hemomanometer and discusses the many types of cases in which observations made by the finger in regard to the blood pressure, plus hemomanometer observations, become of value—the neurasthenic type, the asthmatic type, the cardiac type, the digestive type, the renal type, and the cerebral type. The hemomanometer is of clinical value, in Russell's opinion, as giving a record of the contraction and relaxation of the arterial wall, rather than of the blood pressure.

11. **Beriberi.**—Fraser and Stanton report details of a study from the Institute for Medical Research at Kula Lumpur, Federated Malay States, into the etiology of beriberi. The general results lend support to the view that this disease has, if not its origin in, at least an intimate relationship with, the consumption of white rice, and that further research along these lines is justified.

Medical Press and Circular, London

February 10

20 Intussusception. D. Kennedy.
21 Recent Work on Immunity, Especially in Relation to Diagnosis and Treatment. R. Muir.
22 Aural Complications of Influenza and Their Treatment. H. F. Mole.
23 Physiologic Importance of the Prostate. C. Posner.

Clinical Journal, London

February 10

24 *Aphasia. G. Rankin.
25 Treatment of Displacement of the Abdominal Organs. W. Sheen.
26 Laparotomy for Acute Perforations. G. Watson.

24. **Aphasia.**—Rankin gives a remarkably clear description of the varieties of aphasia, and their causation and differentiation, understandable even by those with a very limited knowledge of the central nervous system. He urges the adoption of Bastian's suggestion, that the term "aphasia" be restricted to defects of speech produced by lesions in Broca's convolution; "aphemia" to those produced by subcortial lesions in the pyramidal fibers; and "amnesia" to those produced in the auditory and visual word centers and in the commissures by which these are connected with one another and with corresponding centers in the opposite hemispheres.

British Journal of Children's Diseases, London

January

27 Two Cases of Tuberculous Appendicitis. J. Allan.
28 *Relation of Dental Disorders to Tuberculosis. F. Morley.
29 Acute Lymphatic Leukemia. C. Johnson.
30 Case of Hydronephrosis. G. Carpenter.
31 Two Cases of Tetanus Neonatorum. G. Carpenter.

28. **Dental Disorders and Tuberculosis.**—Morley insists that a septic mouth is a predisposing cause of tubercle. It is well known that mouth breathing is a contributary cause of phthisis, but not so well known that mouth breathing is often due to dental causes, and that adenoids do not account for every case. Very frequently, enlargement of the cervical glands, the most common cause of which is bad teeth, is probably at first simply inflammatory, becoming tuberculous by infection later. Such infections may certainly travel by way of carious teeth, though it is not suggested that this is the most common route. A septic root, even if painless, should never be allowed to remain in a child's mouth. The author thinks that dentists have become too conservative in their attempts to save carious teeth, by sacrificing practical to cosmetic considerations. He particularly insists that before sending children to sanatoria their mouths should be put into good order. Failing that, each sanatorium should possess a dental surgeon whose post would be no sinecure.

Indian Medical Gazette, Calcutta

January

32 The Legend of Gabriel Boughton. D. G. Crawford.
33 John Woodall, Surgeon-General. W. Foster.
34 *Are "Seven Day Fever" and "Three Day Fever" Forms of Dengue? J. W. D. Megaw.
35 Case of Atropin Poisoning. G. D. Franklin.

34. **Seven-Day Fever and Three-Day Fever.**—Megaw considers these two forms of fever, described, respectively, by Rogers and McCarrison, and discusses the question of their identity with dengue, which he considers provable.

Glasgow Medical Journal

February

36 "Verruga Peruana." J. W. Allan.
37 Intestinal Obstruction in the New-Born: Strangulation Through a Hole in the Mesentery. H. Rutherford.
38 Cerebral Physiology and the Education of Abnormal Children. J. K. Love.
39 Case of Peripheral Neuritis, in Which the Diaphragm Was Paralyzed for Three Months. J. Cowan and R. S. McKim.
40 Landry's Paralysis. J. Cowan, A. J. Ballantyne and D. MacDonald.

Dublin Journal of Medical Science

February

41 Suggestion for a Three Weeks' Holiday. J. Burgess.
42 Present-Day Diagnosis, Treatment and Prognosis of Syphilis. J. J. Abraham.
43 Hand Sterilization. (Continued.) C. G. Cumston.

Journal Laryngology, Rhinology and Otology, London

February

44 Labyrinthine Nystagmus: An Analytic Review of Dr. Robert Barany's "Physiologie und Pathologie des Bogengang-Apparates Beim Menschen." D. McKenzie.
45 Spontaneous Discharge of Cerebrospinal Fluid from the Ear. G. F. Cott.
46 Treatment of Acute Catarrh of the Nose. R. Spira.

Annales de Dermatologie et de Syphiligraphie, Paris

January, X, No. 1, pp. 1-80

47 Crude Coal Tar in Dermatology. (Le goudron de houille brut en dermatologie.) L. Brocq.
48 Treatment of Eczema with Coal Tar. A. Jambon.

Annales de Gynécologie et d'Obstétrique, Paris

January, XXXVI, No. VI, pp. 1-64

49 Tarnier, 1828-1897. A. Pinard.
50 Prolapse of the Umbilical Cord, with Deformity of the Pelvis as Indications for Cesarean Section. (Procidence du cordon et viciations pelviennes, indications de l'opération césarienne.) A. Couvelaire.

Annales de Médecine et Chirurgie Infantiles, Paris

January 15, XIII, No. 2, pp. 37-72

51 *Development of Children in Weight and Height. (Evolution du poids et de la taille chez l'enfant.) E. Gaujoux.
52 Influence of Environment on Gastrointestinal Infections in Infants. (Influence du milieu sur les infections gastro-intestinales du nourrisson.) P. Hutinel.
53 Mercurial Treatment of Infants. (Mode d'administration et la posologie du mercure chez le nouveau-né et le nourrisson.) E. Lesné.

51. **Development of Children in Weight and Height.**—Gaujoux declares that the scales are the thermometer for the nutrition of the child, and that it is just as important to keep an oversight of the child's development in weight after the age of 2 as during infancy. The record of the weight will give accurate information in regard to the child's normal development or lack of it, even when nothing else points to anything wrong. The height is also extremely important. Both weight and height increase under normal conditions according to fixed laws, and he summarizes these laws as follows, giving a number of detailed tables for the different years between birth and puberty. Weight: *The child triples its weight at birth by the end of the first year; doubles this by the end of the seventh year; doubles this by the end of the thirteenth year.* A child that weighs 3 kilos at birth should weigh 9 kilos at the close of the first year and should increase by as many times 1,500 or 1.750 gm. as it is years old up to the age of 7. After 7 it should increase by as many times 2,500 to 2.750 gm. as it is years past 7, up to age of 14. Height: *The height should average at the end of the first year a half more than at birth; should double the size at birth between the ages of 4 and 6, and triple it between 13 and 15.* After the age of 5 the child should grow by adding to its height at this age as many times 0.06 cm. as it is years past 5. These

averages refer of course to French children, but the laws of growth are about the same everywhere as he shows by comparison of German figures.

Archives Générales de Médecine, Paris

January, LXXXIX, No. 1, pp. 1-64

54 *Physiologic Respiratory Exercises in Serofibrinous Pleurisy. G. Rosenthal.

54. Physiologic Respiratory Exercises in Pleurisy.—Rosenthal gives the details of nineteen cases of primary tuberculous pleurisy in which great benefit was derived from respiratory exercises. They are a powerful means of influencing both the acute phase and convalescence of serofibrinous pleurisy, while entirely harmless if done cautiously, testing the susceptibility of the patient and sparing the lungs. The exercises should be unilateral, progressive, diaphragmatic, etc., supplementing the ordinary measures during the acute phase, and beginning with 5 or 10 respirations through the nose, with the patient reclining. The active dose is from 40 to 60 respirations in series of 10. During convalescence these exercises can be repeated from 3 to 7 times a week, with from 60 to 200 respirations in from 6 to 20 separate series. These exercises counteract the tendency to adhesion of the pleura and to chronic pneumonia and local sclerosis. If supervised and kept up, the patients do not develop pulmonary tuberculosis later. The chest measure soon shows the benefit derived.

Archives des Maladies du Cœur, Etc., Paris

January, II, No. 1, pp. 1-64

55 Present Status of Question of Blood Plates. (Plaquettes sanguines.) P. Pagniez.
56 Congenital Cardiac Affection with Intense Secondary Polycythemia and Orthostatic Albuminuria. F. Parkes Weber.

Bulletin de l'Académie de Médecine, Paris

February 2, LXXIII, No. 5, pp. 171-202

57 Rhizomelic Spondylosis with Tabes. F. Raymond.
58 Arsenical Insecticides in Agriculture.
59 Mortality [illegible] rmaingand.
60 *Sulphur [illegible] (Un procédé pratique et économ [illegible] 's navires.) A. Chantemesse and F. Borel.

60. Practical and Economical Sulphur Disinfection of Ships.—Chantemesse and Borel have devised a portable apparatus for thorough sulphur disinfection of the largest ships in the course of two or three hours. It utilizes a *steam motor* and a sulphur burner such as is used in the manufacture of sodium bisulphite, etc. The apparatus generates sulphur dioxid and a supply of the liquefied gas can be produced beforehand so that the reservoir will be full when the apparatus is transferred to the vessel, the motor then serving to propel the gas on hand, besides generating new.

Presse Médicale, Paris

January 27, XVII, No. 8, pp. 65-72

61 Transplantation of Vein in Autoplastic Operation on Urethra. (Transplantation veineuse pour l'autoplastie de l'urètre.) J. Tanton.
62 Results of Lightning Treatment of Cancer. (Courants de haute frequence et action ouloplasique.) A. Zimmern.
63 *Writer's Cramp. (Le spasme fonctionnel.) Lanel.

January 30, No. 9, pp. 13-80

64 Histologic Study of Tongue Affections (La biopsie dans les affections de la langue.) M. Letulle.
65 *Wire "Central Circling" in Treatment of Comminuted Fracture of Leg. (Le cerclage *central* appliqué aux fractures comminutives de l'extrémité supérieure des os de la jambe.) P. Alglave.
66 Retrogression of Sarcoma of Gum Under Radium. Dominici and Faure-Beaulieu.

February 3, No. 10, pp. 81-88

67 Intestinal Hemorrhage After Appendicectomy. Guibé.

February 6, No. 11, pp. 89-96

68 Dietetic Considerations in Diabetics with Obesity and Acetonemia. L Landouzy.
69 The Cammidge Reaction and Its Relation to Pancreatic Affections. H Labbé.
70 Apparatus for Measuring Permeability of Nasal Passages (Atmorhinometer.) Robert-Foy.

63. Writer's Cramp.—Lanel has had the best results from treatment with massage and vibrations in superheated air, followed by re-education to a better method of holding the arm and hand, sparing the muscles from over-exertion. He reports two cases in detail out of a much larger experience to emphasize the advantage of this combination of vibratory treatment and massage in superheated air.

65. Wire Circle to Hold Comminuted Fractures.—Alglave gives an illustrated description of his method of running a wire through the different parts of the fractured upper end of the bones of the leg. In a case described almost perfect functional results were obtained. The measure is applied as soon as possible after the fracture. The focus is exposed and cleansed of clots, the parts are brought into proper position and maintained thus by a silver wire passed through each in turn to form something like a circle. He calls the method "central circling." This was followed by immobilization for several weeks.

Semaine Médicale, Paris

February 3, XXIX, No. 5, pp. 49-60.

71 Different Types of Cardiac Arrhythmia Observed in the Clinic. L. Bard.

February 10, No. 6, pp. 61-72

72 Evolution and Present Status of Surgical Treatment of Diffuse Purulent Peritonitis. F. Moty.

Archiv für klinische Chirurgie, Berlin

LXXXVIII, No. 2, pp. 319-629. Last indexed Jan. 30, p. 423

73 Clinical History of Deforming Inflammation of the Hip Joint. (Arthritis deformans coxæ.) König.
74 Hydatid Cysts of Spine and Spinal Cord. (Echinokokken der Wirbelsäule und des Rückenmarks.) M. Borchardt und M. Rothmann
75 Double Nephrectomy and Reimplantation of One Kidney. (Doppelte Nephrektomie und Reimplantation einer Niere.) A. Carrel.
76 Bacteremia in Ileus and Postoperative Paralysis of the Bowel. A. v Khautz, Jr.
77 Carcinoma of the Tongue. (Zur Statistik des Zungencarcinoms) H Ehrlich.
78 Extensive Resection of Stomach. (Zur Casuistik der ausgedehnten Magenresectionen.) W. J. Rasumowsky.
79 *Actinomycosis of Lung and Pleura. A. A. Opokin.
80 Brain Abscesses After Firearm Wounds. (Hirnabscesse nach [illegible] japanisch-russischen Kriege.) V. T. and R. Mori.
81 Di [illegible] Hospital, Berlin, 1903-1908. E. Schultze.
82 Osteotomy of the Cuneiform Bone for Hallux valgus. (Osteotomie des Keilbeines bei Hallux valgus.) H. Riedl.
83 Infection of Firearm Wounds. (Infection der Schussverletzungen.) W. v. Reyher.
84 Plastic Operation for Avulsion of Scalp. F. Ehler.

79. Actinomycosis of the Lungs and Pleura.—This article reviews Russian literature on this subject—a total of 57 cases, in 21 of which operative treatment was applied. Only 8 cases are on record in international literature, Opokin states, in which operative measures were followed by complete recovery. Primary actinomycosis of the lungs is seldom recognized during life, the symptoms being differentiated as of tuberculous origin. Bacteriologic and Roentgen-ray examination are important aids for an early diagnosis, but the outlook is not promising for surgical intervention in actinomycosis of either lungs or pleura, unless in the earliest stage, before metastasis has occurred. Surgical treatment should include resection of the foci and fistulas into sound tissue. In conclusion 7 cases observed at Rasumowsky's clinic are described in detail.

Beiträge zur klinischen Chirurgie, Tübingen

January, LXI, No. 2, pp. 301-527

85 Operative Exposure of Upper Posterior Surface of Thorax. (Zur operativen Freilegung der hinteren oberen Thoraxfläche) G. v. Saar.
86 Operative Treatment of Pseudarthrosis. (Die Codivilla'sche Operation [illegible] rthrose.) R. Brade.
87 *Hemorrhoi [illegible]
88 Combined [illegible] E. Jacobsohn.
89 *Pathology of Rupture of Bladder. (Harnblasenrupturen.) T. Goldenberg
90 *Rupture of Kidney. (Nierenrupturen.) H. Yoshikawa.
91 *Diffuse Hemorrhage from the Kidneys. (Ueber renale Massenblutungen.) T Bleek
92 Case of Total [illegible] Intestine. (Fall von totaler [illegible] W. Pullmann.
93 Re [illegible] A. Linhart.
94 Operative Treatment of Pyosalpinx. J. Amberger.
95 Subcutaneous Prolapse of Intestine, a Typical Clinical Picture. G. v. Saar.

87. Hemorrhoids.—Silberberg has studied microscopically sections from twenty-two cases of hemorrhoids, his conclusions being that they are the result of local congestion. The disturbance in the circulation causes an effort for collateral circulation with neoformation of vessels, and also induces degeneration of the older vessels and bacterial infection follows. The chemical reaction of the elastic fibers proves conclusively that the hemorrhoid is the result of pressure and stasis.

89. **Rupture of the Bladder.**—Goldenberg reports three cases and discusses the pathology on the basis of these and the cases in the literature. In many instances the rupture was not diagnosed until too late for surgical intervention. The mortality of rupture of the bladder has dropped from 43.5 per cent. in 1895 to 20.5 per cent. in 1905, when operative treatment can be instituted in time. It is especially important to bear in mind the possibility of rupture of the bladder from its being pushed down into the small pelvis by some "physiologic trauma," the attachment to the omentum tearing out a piece of the attached bladder wall where it joins the rear wall, when cicatricial changes have induced unyielding adhesions. One of the cases reported was an example of this spontaneous form of rupture.

90. **Rupture of the Kidney.**—Yoshikawa gives the details of five cases. The patients were men between 25 and 42, a woman of 30 and a boy of 12. Unless there are signs of internal hemorrhage, absolute repose with ice to the kidney region are indicated. His patients were all dismissed in good condition after operative intervention.

91. **Hemorrhage From the Kidneys.**—Bleck discusses the possibility of unilateral nephritis with hemorrhage en masse and reports a case which sustains this assumption. The afection was probably a manifestation of inherited syphilis and was diagnosed as "incipient chronic hemorrhagic nephritis," e patient a girl of 19. He reviews 80 cases from the literature in which microscopic examination was made of the bleeding kidney before the operation, and also 11 other cases of renal hemorrhage. No hemorrhage from the kidney should be styled idiopathic until after microscopic examination has been made. Operative treatment should be considered early, especially nephrotomy, which often has a favorable influence on the hemorrhage, but it should never be undertaken without certainty as to the integrity of the other kidney, as deaths have occurred after nephrotomy in bilateral nephritis. Nephrectomy should never be done as the primary operation for obscure unilateral renal hemorrhage. It is justified only as a secondary intervention when the integrity of the other kidney has been demonstrated.

Deutsche medizinische Wochenschrift

February 4, XXXV, No. 5, pp. 185-232.

96 Operative Treatment of Gastric Carcinoma. (Operative Behandlung des Magencarcinoms, ihre Indikationen und ihre Prognose.) L. Kuttner.
97 *Alimentary Fever. (Ueber alimentäres Fieber.) H. Finkelstein.
98 *Experimental Research on Alimentary Fever. L. F. Meyer.
99 *Salt by the Mouth and Intravenously in Treatment of Internal Hemorrhage. (Die stomachale und intravenöse Behandlung innerer Blutungen mit Kochsalz.) R. von den Velden.
100 Three Cases of Bismuth Poisoning. (Vergiftungen mit Bismutum subnitricum.) E. Zabel.
101 Treatment and Bacteriology of Suppurative Perforation Peritonitis. Kotzenberg.
102 Elimination of Atoxyl in Urine. (Ausscheidung des Atoxyls durch den Harn.) G. Lockemann.
103 To Exclude Admixture of Organic Coloring Matters in Spectrum of Blood. (Ausschaltung organischer Farbstoffbeimengungen beim spektroskopischen Blutnachweis.) O. Leers.
104 The Pulsometer. B. Fellner.

97. **Alimentary Fever.**—Finkelstein here presents the grounds on which he bases his assumption that the food alone, without bacterial intervention, is able under certain conditions to induce fever. This alimentary fever is most striking and most easily studied in infants with gastrointestinal disturbances, and his research has resulted in the discovery that albumin has nothing to do with it, and that sugar and salt are the responsible factors. Fat may have an indirect influence, but the sugar or salt is the one responsible element, and it acts by its physical properties. He is convinced that the physical properties of the salts and salt-like elements in the food have some injurious influence on the cells, checking the normal functioning and thus leading to abnormal decomposition in the body which in turn disturb the regulation of heat. The normal child tolerates salt and sugar without disturbance, but a child with gastrointestinal disturbance responds with fever. Salt or sugar taken into the diseased digestive tract causes the same reaction as when injected subcutaneously. The intestines have evidently some special action on the salt and sugar molecules, rendering them innocuous in normal conditions, but when the intestine is deranged it loses this power. The liver acts vicariously for the intestines in this respect for a time, but when its capacity in this line is exhausted, then alimentary intoxication follows and fever is observed. In infants the intestinal functions and the metabolism in general are still very weak, and consequently the alimentary intoxication occurs on very slight grounds. He believes that severe intestinal processes in adults, chronic colitis, etc., are liable to entail alimentary intoxication in the same way as in infants. The experiences with the latter suggest greater caution in feeding adults with gastrointestinal disturbances with fluids containing salt or sugar, emphasizing the possible importance of sugar and salt in the diet during intestinal derangement and demonstrating the existence of a function of the bowel epithelium in respect to the metabolism of salt and sugar, disturbance in which may explain obscure febrile conditions at all ages.

98. **Experimental Research on Alimentary Fever.**—Meyer is *Finkelstein's assistant* and his experimental research has confirmed in every respect the former's assumptions in regard to alimentary intoxication from salts. He has traced it down to the compounds of halogens with sodium. None of the other sodium compounds displays this fever-producing property, only sodium chlorid, bromid and iodid. The curves cited demonstrate beyond question the possible pyrogenic influence of these latter when the digestive tract is out of order.

99. **Salt in Treatment of Internal Hemorrhage.**—von den Velden has studied for a year the use of salt by the mouth or in infusion as a means of controlling hemorrhage. His experience has confirmed the traditions in regard to the influence of salt in this respect. His research on animals and on healthy volunteers as well as in the clinic has demonstrated that salt enhances the coagulating power of the blood. It is remarkable, however, that it does not have this action in the test-tube, but it is marked in the living subject. He is inclined to attribute this coagulating influence to the mobilization of thrombokinase stored up in the tissues. In 29 cases of hemoptysis he obtained excellent results from administration of 5 gm. (75 grains) of sodium chlorid by the mouth, the coagulating properties of the blood being much increased thereby for a period of from an hour to an hour and a half. The effects become evident in a few minutes. If the tendency to hemorrhage returns later, he repeats the dose of salt or substitutes sodium or potassium bromid in the dose of 3 gm. (45 grains), the bromid having, further, a sedative action. He does not hesitate to keep up this *combined* sodium chlorid and bromid treatment, giving in the most urgent cases from 20 to 30 gm. (ʒv to ℥i) of sodium chlorid, and from 12 to 15 gm. (ʒiii to ʒiv) of the bromid during the day. Any tendency to bromin intoxication is corrected by the sodium chlorid. In 9 other cases he administered the salt or bromid by intravenous injection as he did not wish to irritate the digestive tract or kidneys. This series includes seven patients with hemoptysis, and one each with hemorrhage from varices in esophagus or bladder or typhoid lesions in the bowel. He has never witnessed any disagreeable by-effects from this treatment. The beneficial results were apparent in hemorrhage both in the lung and greater circulation. Hemophilia is a chronic defective condition for which a transient increase in coagulating power is of little avail. The hemophilic tendency is probably the result of defective production of thrombokinase, he thinks.

Fortschritte der Medizin, Leipsic

January 20, XXVII, No. 2, pp. 49-96

105 *Treatment of Syphilis of Nervous System. (Behandlung der Nervensyphilis.) G. Köster.
106 *Assumed Connection [illegible] Tapeworm and Pulmonary Tuberculosis. (Zur [illegible] utmasslichen Zusammenhang zwischen [illegible] Bandwurm, speziell *Botryocephalus latus*, [illegible] an Lungentuberkulose.) Abramowski.

105 **Treatment of Syphilis of the Nervous System.**—Koster advocates local measures along with general mercurial treatment wherever practicable, especially for lesions in throat and mouth. He warns against mercurial treatment when there are already signs of atrophy of the optic nerve as it has been known to aggravate the condition. If undertaken it should be with constant oversight of the conditions in the fundus Even suspension of treatment when the aggravation is noted does not arrest it. For this reason he advises potassium iodid first, and, if mercurial treatment becomes necessary on account of other syphilitic manifestations, the eye should be examined by an ophthalmologist every third day. He also warns against the use of atoxyl; it not only is liable to have an injurious influence on vision but may induce disturbances in the voiding of bladder and bowel contents leading to total incontinence He emphasizes the fact that this widely advertised drug, alleged to be free from toxic action and to be a sort of panacea for diverse diseases, in treatment of syphilis, is proving a two edged sword which should be used only with extreme caution. A course of mineral waters, as at Aachen, Wiesbaden or Tolz, is a powerful adjuvant in treatment of syphilis of the nervous system on account of the stimulation of the general metabolism. Even if no benefit is derived from the first course of the kind, experience has shown that hitherto apparently irreparable symptoms may subside during a second or third repetition.

106. **Pulmonary Tuberculosis and Tapeworm.**—Abramowski practices in a seashore district where the tapeworm is common owing to the frequent practice of eating insufficiently cooked fish He has noticed that the anemia resulting from the presence of the *Bothriocephalus latus* affords a marked predisposition for pulmonary tuberculosis which is also remarkably prevalent. Even the "resorters" frequently acquire tapeworm during their stay as smoked raw fish is considered a local delicacy

Munchener medizinische Wochenschrift

February 2, LVI, No 5, pp 217 264

107 Multiple Functions of the Cell (Partialfunktionen der Zelle) P Ehrlich
108 Localization of the Curvature, and Other Requisites in Treatment of Scoliosis (Lokalisation der Umkrümmung und andere Forderungen in der Skoliosenbehandlung) J Fränkel
109 (Die Rontgenstrahlen im Dienste [illegible]
110 of Colpoceliotomy and the Alexan [illegible] H Freund
111 by Municipal Authorities (Die Methoden der praktischen Grosstadtdesinfektion) H Trautmann
112 Arrest of Hemorrhage from the Cystic Artery by Ligation of the Hepatic Artery (Stillung der Blutung aus der Art cystica durch Unterbindung der Art. hepatica propria) H. Kehr
113 Arsenicated Mineral Waters (Zur Arsentherapie mit der Durkheimer Maxquelle) R von den Velden
114 Scarlet Red in Treatment of Eye Affections (Anwendung von Scharlachrot bei Augenaffektionen) M Wolfrum and R Cords
115 Treatment of Tuberculin with Spengler's "IK" S Herzberg
116 Dental Frontal Headache (Dentaler Stirnkopfschmerz) F. Muller
lapse of Lung When Thorax Is Opened (Der kunstliche
117 Peruvian Balsam, Etc, in Suppurative and Tuberculous Processes (Anwendung der Digestivmittel bei eitrigen und tuberkulosen Prozessen) M Mayer

Therapeutische Monatshefte, Berlin

February, XXIII, No 2, pp 65-128

118 *Treatment of Acute Alimentary Disturbances in Infants (Therapie der akuten Ernahrungsstorungen im Sauglingsalter) B Salge
119 *Preparation for and Care After Gynecologic Operations R. Birnbaum
120 Heart Tonics Before and After Gynecologic Operations (Herzmittel vor und nach gynakologischen Operationen, nebst Bemerkungen uber die Bedeutung von Narkose und Operation bei Erkrankungen des Zirkulationsapparates) R T Jaschke Commenced in No 1
121 Relations Between Constitutional and Ear Affections (Beziehungen zwischen Allgemeinleiden und Ohrkrankheiten) Piersing Commenced in No 1
122 *Nature and Treatment of Typical Form of Benign Stenosis of the Colon at the Splenic Flexure (Typische gutartige Stenose an der Flexura lienalis coli) E Payr. Commenced in No 1
123 Treatment and Danger of Contagion in Pertussis (Ansteckungsgefahr und Therapie des Keuchhustens) E Müller
124 Dangers of [illegible] atment (Gefahren der [illegible] A Fraenkel
125 Disadv [illegible] with Other Drugs (Kombination der Digitalis and homologer Agenzien mit anderen Arzneimitteln) J Pohl

118 **Treatment of Acute Alimentary Disturbances in Infants.**—Salge remarks that the mother always insists on adding something to the water when the indications are to stop all intake of food while the digestive apparatus is closed for repairs. For this reason he allows admixture of tea with the water, but sweetened only with saccharin, no sugar. If the infant vomits constantly, its lips and tongue can be kept moistened with cold water from a dropper. When there is much diarrhea it is foolish to give laxatives or to try to check the diarrhea with drugs as it is answering a useful purpose. If fluids given by mouth or rectum are not retained, from 125 to 150 c.c. of physiologic salt solution should be infused twice during the twenty-four hours. The temperature should be brought to normal with from four to six cold packs in an hour, repeated again during the day, or if the child is cold, warming it with thermophores or the incubator. But he warns emphatically that these measures require the most constant supervision as the effect frequently runs to the opposite extreme. Camphorated oil may be useful in case of weak heart action The trouble is in the general metabolism, not merely in the digestive tract alone, and the metabolism will suffer irreparable injury if all food is stopped for more than twenty-four or forty-eight hours. Infants suffer especially from lack of carbohydrates, but they must be given in minute amounts and very cautiously not to supply a culture medium for bacteria in the intestines. It may be necessary to remove the fat even from breast milk by centrifugalizing it but when this is done the child is liable to thrive at once. Not more than from 30 to 50 c.c. daily should be allowed during the first two or three days, watching the urine for sugar. The limits of toleration for the carbohydrates are very narrow in these children, so that constant supervision is necessary as any excess may bring on new disturbances. After the infant has borne this fat-free diet for from ten to fourteen days, the whole milk can be resumed, but it is impossible for recuperation to be very rapid as the general metabolism has been so disturbed. If unable to obtain fat-free breast milk, he gives instead freshly prepared whey obtained from raw cow's milk with rennet

119 **Care of Patient Before and After Gynecologic Operation.**—Birnbaum states that he has frequently found the temperature several degrees below normal at the close of a tedious operation, even when the operating table and room were specially heated. This shows the importance of warming the patient after an operation. Continuous irrigation of the rectum with warm salt solution, a drop at a time, by the Katzenstein technic, he advocates as the most reliable measure for the purpose It has the further advantage of stimulating bowel peristalsis without incommoding the patient. Cold alcohol rubs of the chest and back are useful to prevent thrombosis and complications on the part of the lungs. Systematic breathing exercises are also in order, and active and passive exercises of the legs He prefers repeated and systematic catheterization and disinfection rather than the employment of a retention catheter in case of paralysis of the bladder. When there are symptoms of paralysis of the intestines, he states that great benefit is obtained by rinsing out the stomach, followed by the administration of a large dose of castor oil

122 **Stenosis from Kinking of the Intestine at the Splenic Flexure.**—Payr describes in detail twenty-five cases of nonmalignant stenosis of the colon in which he has performed operations during the last four years with permanently successful results.

Therapie der Gegenwart, Berlin

February, L, No 2, pp 73-120

126 *Gout (Zur Pathologie und Therapie der Gicht) F Umber.
127 Changes in Application of Digitalis in Spontaneous Hemorrhage (Wandlungen im Digitalisgebrauch bei spontanen Blutungen) Focke
128 Experimental and Clinical Study of Treatment of Collapse with Intravenous Injections of Adrenalin (Behandlung von Kollapszustanden mit intravenosen Adrenalininjektionen) R Kothe

126 **Treatment of Gout.**—This article is based on extensive personal research on the metabolism of individuals with gout.

out of a total of 137 cases, with comparative research on healthy subjects. The findings are particularly instructive as the research was undertaken almost exclusively on a purin-free diet, thus providing a common base for comparison. Twenty-seven of the patients were of the laboring classes. The practical results of the research described include the typical curve of the elimination of uric acid on a purin-free diet. The amount eliminated grows less and less until an attack of gout is impending, when the elimination rapidly increases to reach a high point about the second day after the onset of the attack, and then rapidly subsides again. These waves of endogenous elimination vary somewhat in individuals, but a long continued endogenous curve including several attacks is absolutely pathognomonic, as he shows by comparison with curves in various other affections. Another point is that the gouty respond to ingestion of purin bodies with a much less and more protracted elimination of uric acid than the non-gouty, especially during the depression stage following about a week after an attack. Ingestion of food containing much purin is liable to bring on an attack of gout. He ascribes the retention of uric acid to a peculiar affinity of the tissues for the uric acid. Another pathognomonic feature of gout is the opposite behavior of glycocoll, the retention of one coinciding with increased elimination of the other. During the flood of uric acid in an attack, the glycocoll vanishes completely. There is no medicinal treatment of gout, Umber says, except to relieve the acute attack; the only way to influence the disease is by the diet, which should aim to prevent the accumulation of uric acid in the tissues and in the blood and to provide the most favorable conditions for its metabolism and elimination. He advises refraining from meat entirely when an attack is threatening and for a week or two afterward, and to interpolate from 2 or 3 up to 4 or 6 purin fast days in each week, keeping this up for weeks, months and years. He never allows more than 200 gm. of meat in one day. His research has further confirmed the fact that the retention of uric acid is more pronounced in proportion at night, and consequently he advises that the gouty should take their principal meal in the morning or at latest noon. He quotes Garrod that every particle of food not absolutely needed for the nourishment of the body merely nourishes the disease. Copious ingestion of water certainly aids in the elimination of uric acid, but alkaline waters have the opposite effect. It is all the other factors of spa treatment rather than the mineral content of the water that benefit in a course at a watering place. He remarks in regard to the various remedies for gout on the market that they all promote the solubility of free uric acid, but this does no good in gout as the blood of the gouty is able to dissolve larger proportions of free uric acid than it ever contains. The problem is to dissolve the acid sodium urate, the form in which the uric acid is deposited in gout. These remedies have no action on the sodium urate and he thinks that this is true also of hydrochloric acid. He declares that none of the alkalies or mineral waters has any specific influence on the purin metabolism in gout and that the propaganda for the "lithium content," etc., of springs should be abandoned. He has noticed that the elimination of uric acid decreased during muscular exercise even on a purin-free diet. This must be due to participation of the purin bodies in the increased oxidation processes incident to muscular exertion. This recalls, he says, the saying of an English physician that no man would suffer from gout if he could keep a slave to massage him regularly.

Virchows Archiv, Berlin

January, CXCV, No. 1, pp. 1-176

129 Morphologic Structure and Morphologic and Chromatic
Changes in the Leucocytes. A. Cesaris-Demel.
130 Wax-like Transformation of Muscle Fibers. (Wachsartige
R. Thoma.
Umwandlun [illegible] M. v. Tiesenhausen.
131 Implantation [illegible] yroid of a Dog. G. Schöne.
132 Sarcoma and [illegible] W. Nowicki.
133 Anatomic Study of Appendix and Appendicitis.

Zentralblatt für Chirurgie, Leipsic

January 30, XXXVI, No. 5, pp. 137-176

134 Regional Anesthesia in Transplantation of Skin. (Regionäre Anästhesie bei Hauttransplantation.) G. Nystrom.
135 New Apparatus for Intrathoracic Operations Under Differential Pressure. (Neuer Apparat für intrathorakale Operationen unter Differentialdruck.) W. Meyer (New York).

February 6, No. 6, pp. 177-208.

136 *Artificially Induced Open Hydrothorax for Prevention of Collapse of Lung When Thorax Is Opened. (Der künstliche offene Hydrothorax zur Erhaltung der Lungenatmung bei Thoraxeröffnungen.) H. Teske.

136. Artificially Induced Open Hydrothorax to Prevent Collapse of Lung.—Teske has found that if water is allowed to flow into the thorax when it is opened, the lung floats on the water and it does not collapse. He found this a perfectly practical and feasible way to maintain approximately normal respiration in the exposed lung when a large flap was cut in the thorax wall. He experimented on rabbits, placing them in a bath-tub with blood-warm water and found that respiration proceeded with surprising regularity and normal tempo, the exposed lung keeping time with the intact lung. If the animal was taken out of the water but left on its back, enough water remained in the chest to answer the desired purpose, but if the animal was turned on its belly, the water ran out and the lung collapsed at once. He also found it possible to accomplish the purpose by artificial irrigation of the thoracic cavity, allowing the water to flow in and out, the cannula being wide enough to keep the opening from closing. He is convinced that this method of preventing the collapse of the lung in cases of injury of the lung or heart requiring surgical intervention will prove useful in the clinic, especially in urgent cases requiring rapid work. The shock from collapse of the lung will thus be avoided. Warm salt solution has a stimulating effect on the organs in the chest. He concludes the operation by suturing the lung to the chest wall and allowing the water to escape. He does not think that there need be fear of infection if sterile salt solution and rubber gloves are used, especially as the pleura possesses normally considerable resisting power against infection.

Zentralblatt für Gynäkologie, Leipsic

January 30, XXX, No. 5, pp. 161-200

137 Bacteriologic Diagnosis of Puerperal Fever. Krönig and Pankow.
138 Suture of Skin at Perineum with Michel's Clips. (Zur Hautnaht des Dammes mittels Michel'scher Klammern.) K. Mayer.
139 Construction of Vagina out of Loop of Small Intestine. (Scheidenbildung unter Benutzung einer verlagerten Dünndarmschlinge bei Uterus rudimentarius cum Vagina rudimentaria.) M. Mori.
140 Roentgen-Ray Treatment in Gynecology. Albers-Schönberg.
141 Treatment of Vaginismus with Vaginal Dilator. O. Oberländer.
142 Absorbing Power of Mucosa of Vagina and Uterus. (Resorptionsfähigkeit der Schleimhaut der Vagina und des Uterus.) E. Falk.

February 6, No. 6, pp. 201-232

143 Clinical and Anatomic Study of Endometritis. M. Henkel.
144 *Vaginal Cesarean Section in Severe Eclampsia a Month before Term. (Vaginaler Kaiserschnitt bei schwerster Eklampsie im 8. Schwangerschaftsmonat.) Nacke.
145 Dilator for Treatment of Abortion. (Uterusdilatator bei Abortbehandlung.) O. Oberlander.

144. Vaginal Cesarean Section in Severe Eclampsia.—Nacke relates a case which demonstrates that this intervention may prove the only life-saving measure possible in severe eclampsia. But the case further emphasizes the possible complications and mishaps liable when such an operation is attempted in a private house, and that the operation may meet with unexpected difficulties when done before the cervix is dilated, especially when the latter is abnormally long.

Hygiea, Stockholm

December, LXX, No. 12, pp. 1235-1378

146 *Suppurative Affections of the Internal Ear. (Om Inneröratsvariga sjukdomar.) G. Holmgren. Commenced in No. 11.
147 *Vaginal Technic for Operations in Gynecology and Obstetrics. A. Dührssen.
148 Ear Affections in Traditional Household Medicine. (Om öronsjukdomarna i den skånska folkmedicinen.) E. Bergh.

146. Suppurative Affections of the Internal Ear.—This article is practically a clinical study with details of typical specimens of each of the various affections involved and the conclusions from comparison of the course with results of treatment and pathologic findings; the whole is classified under the headings of the different affections described. Holmgren has continued Blau's compilation of cases of necrosis of the labyrinth on record, and tabulates the details of 20 more, thus bringing the total to 124. He devotes a chapter to the prognosis and complications of labyrinthitis and another to the treatment and technic, with 12 pages of bibliography, likewise classified.

147. **Vaginal Technic for Operations.**—This communication from Dührssen was read at the last Swedish medical congress and is accompanied by eight illustrations to explain the details of the vaginal technic. He also describes his recent modification of his method of vaginal Cesarean section by preceding it with the hystereurynter, utilizing the measure, he remarks, which the practitioner should always regard as the first indispensable step in all cases requiring immediate delivery with the cervix still undilated. If the case is very urgent, manual traction can be exerted on the inflatable bag, but if the cervix fails to dilate when the lower segment of the uterus is thus pulled down, the attempt should be abandoned, as otherwise the cervix or the inflatable bag is liable to rupture. This is especially the case with rigid cervix, and if the cervix persists undilated vaginal Cesarean section is required, or deep incisions in the vaginal portion of the uterus if the cervix has opened. In such a case the general practitioner must summon a specialist or should limit his intervention to expectant treatment until the progress of labor has rendered manual extraction possible. The use of the inflatable bag facilitates Cesarean section. By traction on the bag it is possible to bring the cervix into view when it is an easy matter to make a sagittal incision in the posterior lip and prolong it upward for about 3 cm. With the gloved finger the peritoneum is then pushed away from the posterior wall of the bladder, as far up as necessary, and a loop of suture material is passed through the upper end of the slit. The anterior lip is then incised and a loop of thread introduced in the same way. The inflated bag sinks lower and lower as the cervix opens, and the upper parts of the cervix walls are thus brought into view and can be easily incised, with the bleeding under control. The bag finally slides out of the uterus, when the fetus can be easily extracted. After the placenta has separated, the uterus is drawn down by the loops of thread; the threads are tied and the posterior and then the anterior lips of the cervix are sutured. The continuation of the incision into the fornices does not require suturing as the lips of the wounds are pressed closely together. When the aftercoming head is retained by the cervix the procedure is about the same, the head acting like the inflatable bag whose place it takes. He has successfully applied this technic in one case, severing the constricting ring. The technic is the same as that recently proposed by Döderlein, but Dührssen does not approve of it except under these conditions, as one has to operate in the dark and he doubts whether the bladder will ever spontaneously detach itself from the uterus wall. If it does not, injury of the viscus is almost inevitable. The cases which require vaginal Cesarean section are the very ones in which there is almost certain to be special adhesion between the bladder and uterus, as in elderly primiparæ with rigid cervix or in case of prolapse. Comparing the vaginal and abdominal extraperitoneal technics he remarks that the public has greater dread of abdominal than of vaginal operations, but that the abdominal extraperitoneal technic has certainly a brilliant future in cases of much contracted pelves.

Norsk Magazin for Lægevidenskaben, Christiania

January, LXX, No. 1, pp. 1-244

149 Cardiac Insufficiency with Contracted Kidney and High Blood Pressure. (Arteriosklerose med skrumpnyre og hjertehypertrofi.) P. F. Holst.
150 Torsion of Pedicle of Left Ovary in Two Little Sisters. (Stilkdreining af venstre ovarium hos to søstre, 8½ og 7 aar gamle.) J. Roll.
151 Cutaneous and Ocular Tuberculin Reactions. E. Kaurin.
152 Favorable Experiences with Trusses in Hernia. (Smaatrack fra brokbaandsbehandlingen.) O. Borchgrevink.
153 Five Generations of a Family with Six Fingers and Toes. (En familie med seks fingre og seks tær.) V. Magnus
154 *Forty-three Cases of Exophthalmic Goiter. (Morbus Basedowii.) H. J. Vetlesen.

154. **Exophthalmic Goiter.**—Vetlesen's article is published as a 128-page supplement to the *Magazin.* All but 2 of the 43 patients were women, and the majority of cases developed between the ages of 20 and 30 or 40 and 50. A fright or great sorrow had evidently something to do with the onset of the affection in several cases, and acute articular rheumatism or rheumatic complications were evident in 8. One patient had had acute rheumatism five times. He also calls attention to the fact that 8 of his patients suffered from hemicrania and that 3 of these and 5 others had a family history of hemicrania in the parents or grandparents. He believes that this suggests some special connection between exophthalmic goiter and hemicrania. Simple goiter was also noted in the direct family antecedents of 4 of his patients, and 4 others have brothers or sisters with goiter. In 3 cases both mother and daughter were affected. All his patients were cured or much improved with the exception of 5 whose deaths later are recorded. His treatment consisted of thymus extract and sodium phosphate, alone, alternating or combined, and his impressions are very favorable as to the efficacy of this method of treatment. He is undecided as to whether the sodium phosphate or the thymus extract deserves the preference, but the cost of the latter sometimes turns the scale against it. Thyroid treatment of exophthalmic goiter is directly contrary to the indications, the trouble is the result of hyperfunctioning of the thyroid gland and it is absurd to give more thyroid. It is even liable to transform a simple goiter into the exophthalmic form, of which he relates several examples, the patients having been given thyroid treatment by some other physician before they consulted him. One of his patients was doing well under sodium phosphate when exacerbation followed an attack of influenza, and he ordered thymus tablets. No improvement followed, the general condition and symptoms rather becoming aggravated. After taking from 70 to 80 tablets the patient discovered that the bottle was labeled "thyroid tablets" instead of the prescribed "thymus." As soon as thymus tablets were substituted for the thyroid, improvement was rapid and has been permanent to date. In one of the cases with fatal termination the patient had been taking "antithyroidin," which seemed to have a toxic action. Roentgen-ray treatment was applied in only 2 cases; the results were excellent in one but nearly negative in the other. Operative treatment was instituted in 2 cases; in the first there was considerable improvement for a few months but then a second operation became necessary and the patient soon succumbed to asystoly or possibly embolism. The other patient seemed to derive great and permanent benefit from the operation. He prescribes the sodium phosphate in the dose of 1 gm. (15 grains) in solution four times a day. The more recent the onset of the symptoms, the more effectual the sodium phosphate. He gives from 2 to 4 of the thymus tablets three times a day. He tabulates the details of the 43 cases for comparison, with the age, initial symptom, treatment, etiology, etc. He has been using the sodium phosphate since before 1899, on the recommendations of Trachewsky, Sahli and Kocher. He has never witnessed any inconveniences from its administration, even when kept up for many months. Very exceptionally, a little tendency to diarrhea was noticed, but this righted itself at once when he reduced the dose somewhat. He tried several other drugs in the course of his experiences, but long since abandoned them all for the sodium phosphate or thymus tablets.

Ugeskrift for Læger, Copenhagen

January 21, LXXI, No. 3, pp. 57-76

155 *Papulous Syphilids in Mouth Nine Years After Infection, with Positive Findings of Pale Spirochetes. L. Nielsen.

January 28, No. 4, pp. 77-106

156 Diagnosis of Destruction of the Internal Ear. (Om Diagnosen Labyrintdestruktion.) P. T. Hald.

155. **Papulo-Erosive Syphilids in Mouth Nine Years After Infection.**—Nielsen's patient was a man of 28 who had been infected with syphilis nine years before and had been smoking some of late. Typical pale spirochetes were cultivated from the scrapings of the lesions in the mouth. The primary infection had been thoroughly treated, it was supposed. In two other patients the syphilids developed on the tongue eleven and thirteen years after infection and recurred whenever the patient smoked much.

Gazzetta degli Ospedali e delle Cliniche, Milan

January 24, XXX, No. 10, pp. 97-112

157 *Influence of Injections of Lecithin on Serodiagnosis of Syphilis. (Azione delle iniezioni di lecitina sulla reazione di Wassermann.) G. Quarelli.

January 28, No. 12, pp. 121-128

158 *Phlebitis Following Interval Appendicectomy. A. Sertoli.

January 31, No. 13, pp. 129-144

159 *Hernia of Diaphragm with Gastric and Intestinal Stenosis. (Ernia diaframmatica.) F. Senna.

160 *Primary Cancer of Pancreas: Chauffard's Syndrome in Diagnosis. G. Alessandri and C. Minerbi.

February 2, No. 14, pp. 145-152

161 *Stimulating Influence of Scarlet Red on Regeneration of Epithelium. A. Cernezzi.

157. **Influence of Injections of Lecithin on Serodiagnosis of Syphilis.**—Quarelli states that in twelve cases of syphilis in which serodiagnosis was positive, several injections of lecithin had the result that the serodiagnosis gave negative findings thereafter in all but four cases. In some of these, however, the reaction increased in intensity.

158. **Phlebitis Following Interval Appendicectomy.**—The three patients in the cases reported by Sertoli were young men, and the phlebitis developed between the tenth and fourteenth day of aseptic healing of the wound. They were all debilitated from repeated attacks of appendicitis. The phlebitis was limited exclusively to the left leg and subsided harmlessly after a few days.

159. **Hernia of the Diaphragm.**—Senna reports a case to emphasize the points useful for differentiation. It is not difficult if the phenomena in the chest and abdomen are minutely studied and coordinated. The autopsy in his case confirmed the diagnosis showing that the sudden symptoms were the result of incarceration of the stomach in the hernia. A perforation was found in the stomach and also in the ascending colon which was likewise involved in the hernia. An important sign is the presence of gas in the pleural cavity, without metallic sounds.

160. **Cancer of the Head of the Pancreas.**—The syndrome presented was that described by Chauffard as characteristic of primary cancer of the head of the pancreas. The only additional symptom was uncontrollable vomiting. The Loewy sign—the ocular reaction to adrenalin—was very pronounced. The cancer in this case had originated in the gall bladder, which contained stones, and had involved the liver, spreading later to the head of the pancreas, but the body was intact. The case does not detract from the importance of the Chauffard syndrome, but shows that it differentiates malignant disease in the head of the pancreas only when there are no other foci elsewhere and when direct palpation of the gall bladder excludes biliary lithiasis with reasonable certainty.

161. **Influence of Scarlet Red on Regeneration of Epithelium.**—Cernezzi has been applying a 5 or 8 per cent. lanolin or petrolatum salve of scarlet red, the dye which Fischer found so remarkably active in inducing proliferation of epithelium. Cernezzi applied the salve to extensive burns or other raw surfaces, or to hasten the healing of Thiersch or Reverdin flaps. He applies the salve in a thin layer to the edges, covering it with perforated rubber tissue, renewing the dressing in one or two days. The rapid proliferation of the epithelium was most striking even in cases long rebellious to other measures. One man with a burn of the entire forearm and part of the hand was treated with Thiersch flaps and the scarlet salve and the lesions healed over very rapidly with a much firmer growth of epithelium than is usual after such transplantation, allowing the man to resume his trade as a mechanic without mishap during the five months since. No by-effects were ever observed with the salve. Cernezzi warns that it is not necessary to apply the salve except to the edges of the islands or borders of epithelium; it is inadvisable to interfere with the development of granulations by applying the salve to them as it might induce maceration. Neither he nor Schmieden thinks there is any danger of inducing excessive proliferation as the salve is applied lightly to the surface, not injected subcutaneously as in Fischer's experiments.

Policlinico, Rome

February 7, XVI, No. 6, pp. 165-196

162 *Lime in Treatment of Epilepsy. (La terapia calcica nell' epilessia.) F. Ciccarelli. (Commenced in No. 5.)

162. **Lime in Treatment of Epilepsy.**—Ciccarelli gives the details of twenty-nine cases of epilepsy in which he found that treatment with lime had a pronounced effect in mitigating the seizures and reducing their number. He regards the lime salts as preferable to the bromids at times, the best results being obtained when a course of lime was alternated with the ordinary bromid treatment. He gave daily from 2 to 3 gm. (30 to 45 grains) of calcium hypophosphite in fractional dose. The patients were all chronic epileptics, although the affection was of traumatic origin in some and associated with infantile spastic paralysis in others, the majority, however, being of the idiopathic variety.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

EDUCATIONAL PAMPHLETS, Issued by the Committee on Experimental Medicine of the Medical Society of the State of New York, 17 West Forty-third Street, New York. ANIMAL EXPERIMENTATION AND DIABETES. By Graham Lusk, New York City. THE ETHICS OF ANIMAL EXPERIMENTATION. By John Dewey, New York. ANIMAL EXPERIMENTATION AS VIEWED BY THE SUPERINTENDENT OF A HOSPITAL. By G. F. Clover, New York City. THE SERVICE OF ANIMAL EXPERIMENTATION TO THE KNOWLEDGE AND TREATMENT OF NERVOUS DISEASES. By Charles L. Dana, New York. THE RELATION OF ANIMAL EXPERIMENTATION TO THE LIVE STOCK INDUSTRY. By Veranus A. Moore, Ithaca, N. Y. ANIMAL EXPERIMENTATION AND NUTRITION. By Lafayette B. Mendel, New Haven, Conn. WHY ARE SPECIAL LAWS TO RESTRICT ANIMAL EXPERIMENTATION UNWISE? By J. G. Curtis, New York City. Each 4 pp., paper.

INDEX-CATALOGUE OF MEDICAL AND VETERINARY ZOOLOGY. U. S. Department of Agriculture, Bureau of Animal Industry—Bulletin No. 39, Parts 22 and 23. By Ch. Wardell Stiles, Ph.D., Consulting Zoologist of Bureau of Animal Industry; Zoologist of U. S. Public Health and Marine-Hospital Service, and Albert Hassall, M.R.C.V.S., Assistant in Zoology, Bureau of Animal Industry. Paper. Washington: Government Printing Office, 1909.

NEW AND NONOFFICIAL REMEDIES, 1909. Containing Descriptions of the Articles Which Have Been Accepted by the Council on Pharmacy and Chemistry of the American Medical Association, *Prior to* Jan. 1, 1909. Paper. Pp. 168. Price, single copy: Paper cover, 25 cents. Cloth cover, 50 cents. Chicago: Press of American Medical Association, 1909.

HOW TO NURSE SICK CHILDREN. By Charles West, M.D., Founder of and Late Physician to the Hospital for Sick Children, Great Ormond Street. With a Preface by George F. Still, M.D., Physician to Out-Patients, The Hospital for Sick Children. New Edition. Cloth. Pp. 52. Price, 40 cents. New York: Longmans, Green & Co., 1908.

PRACTICAL PHYSIOLOGICAL CHEMISTRY. By Philip B. Hawk, M.S., Ph.D., Professor of Physiological Chemistry in University of Illinois. Edition 2. Cloth. Pp. 447, with illustrations. Price, $2.50. Philadelphia: P. Blakiston's Son & Co., 1909.

ABSTRACTS FROM A PRACTITIONER'S HANDBOOK OF MATERIA MEDICA AND THERAPEUTICS. Based Upon Established Physiological Actions and the Indication in Small Doses. By T. S. Blair, M.D., Member American Medical Association. Paper. Pp. 48. Philadelphia: The Medical Council.

ECONOMIC ASPECTS OF LENGTHENING HUMAN LIFE. By Prof. Irving Fisher of Yale University. President of the Committee of One Hundred on National Health. Address Delivered Before The Association of Life Insurance Presidents, New York, Feb. 5, 1909. Paper. Pp. 18.

ROTUNDA PRACTICAL MIDWIFERY. By E. Hastings Tweedy, M.D., F.R.C.P.I., Master of the Rotunda Hospital, and G. T. Wrench, M.D., Late Assistant Master. Cloth. Pp. 464, with illustrations. Price, $6. New York: Oxford University Press.

REPORT OF AN INVESTIGATION OF WATER AND SEWAGE PURIFICATION PLANTS IN OHIO. Made Under Authority of an Act of Legislature, Passed Feb. 23, 1906. 1906-1907. Cloth. Pp. 888. Columbus: F. J. Heer, State Printer, 1908.

QUAIN'S ELEMENTS OF ANATOMY. Edited by E. A. Schäfer, Johnson Symington and T. H. Bryce. Edition 11. Vol. III, Part 1: Neurology. By E. A. Schäfer and J. Symington. Cloth. Pp. 421, with illustrations. Price, $4.50. New York: Longmans, Green & Co., 1908.

PARCIMONY IN NUTRITION. By Sir James Crichton-Brown, M.D., LL.D., F.R.S., Lord Chancellor's Visitor in Lunacy, London. Cloth. Pp. 111. Price, 75 cents. New York: Funk & Wagnalls Co., 1909.

TRANSACTIONS OF THE SIXTEENTH ANNUAL MEETING OF THE HAWAIIAN TERRITORIAL MEDICAL SOCIETY. Held in Honolulu, November, 1907. Paper. Pp. 88.

REPORT OF THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION. Food Products, 1908. Being Part IX of the Biennial Report of 1907-1908. Paper.

CALIFORNIA GROUND SQUIRRELS. By C. Hart Merriam, Chief U. S. Biological Survey. Paper. Pp. 8. Washington: Government Printing Office, 1909.

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Original Articles

CONSERVATISM IN SURGERY

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Conservatism has no place in modern surgery, and it has even gone out of date in religion. If we wish to speak of a surgeon in the highest praise we should not use the word conservative. There was a time—fortunately for us long ago—when to designate one as a conservative in medicine, religion or politics was to bestow on him the highest praise. The Century Dictionary defines conservatism as "the disposition to maintain and adhere to the established order of things; opposition to innovation or change;" and a conservative as "one who is opposed by nature or principle to innovation and change; in an unfavorable sense, one who from prejudice or lack of foresight is opposed to true progress." Conservatives in this sense have ever clogged the wheels of progress.

While we use the term now in a more liberal sense, applying it to one who is progressive without going to extremes, it is far better to use the term "progressive," because the progressive surgeon is one who does not make changes for the sake of change but for improvement. He does not accept a new point in technic or pathology because it is new, but because it is better than the old. In other words, a progressive surgeon is one who is neither a conservative nor a radical. Some operations should be radical, but no surgeon should be so. At the beginning of the present surgical era, the greatest in the history of the world, the conservatives were the worst enemies of the progressive surgeon, but now he has the radicals to deal with. The former were constantly denouncing operations and treating patients medically without success who are now being treated successfully by surgery. The latter are constantly taking advantage of the safety of modern technic and performing unwarrantable operations. to the detriment of progressive surgery. This is the age of radicalism, and it might be better to take that as a text: but it is scarcely possible to discuss Scylla without also discussing Charybdis, so I shall discuss them in turn.

While the conservative is out of date and has lost most of his influence as an obstructionist, he is still sufficiently in evidence to be entitled to an occasional reminder of his shortcomings.

Some cases of empyema are still being treated medically or with the aspirator.

Tumors of the breast are too often neglected, notwithstanding the fact that over 80 per cent. of them are malignant and that the only hope of the patient lies in early and radical operation.

Many patients suffering from gallstones are being treated for dyspepsia.

Appendicitis is too often treated by hot or cold applications until the best time for operation has passed.

Typhoid and other intestinal perforations are very commonly neglected until all hope from operation is gone.

When conservatism prevailed the mortality rate from obstruction of the bowels was 95 per cent. This rate has now been reduced to 45 per cent. or less by progressive surgeons, and this latter could be reduced more than half if the conservative habit of waiting could be overcome.

In the treatment of diseases of the female pelvis the conservative was long since displaced by the radical, who in turn is being gradually but surely displaced by the progressive surgeon.

Numberless prostates are being treated by the catheter and other conservative methods that might better be operated on. Up to the present time it has been impossible for prostatectomy to be placed on a proper footing because the patients were and are so commonly treated conservatively that the surgeon gets only complicated cases.

The statement just made concerning breast tumors is equally applicable to malignant growths in any location, but delayed diagnoses are more excusable in internal organs like the stomach because early evidences of the growth can not be demonstrated by sight and touch. The conservative still treats patients with these growths for dyspepsia and other functional disorders until tumors are palpable, when all hope of successful surgical treatment usually is gone. The conservative tells the woman who has passed the menopause who comes to him on account of a bloody vaginal discharge that it is a trifling affair and prescribes a vaginal douche, thus depriving her of the hope offered by modern surgery. He applies salves to the little, hard ulcer on the lower lip until the neighboring lymphatic glands become enlarged, when in addition to the ointment he paints the glands with iodin.

Unfortunately we are still groping in the dark as to the cause of cancer; but we do know that under conservative treatment the mortality rate, except in a few very superficial cases, is 100 per cent. We also know that surgery does save a certain percentage when the disease is recognized and the patient operated on early. How anyone can treat incipient malignant disease conservatively in the face of these facts is beyond comprehension. A certain few cases of very superficial cancer can be cured by the *x*-ray, by radium, and by caustic paste, but it is now thoroughly understood that these agents have absolutely no curative effect on extensive malignant tumors or deep-seated malignancy and their use in these cases is unwarrantable conservatism.

In tuberculosis of bones and joints the conservatives have their best opportunity, but they have carried conservatism to such an extreme that surgeons are prone to become radicals. Between the conservative who never operates and the radical who always operates in these cases, the progressive surgeon scarcely gets an opportunity to demonstrate what can be accomplished. In at least 75 per cent. of the cases of bone and joint tuberculosis the tendency is toward self-limitation of the disease and ultimate recovery with deformity. The conservative assists Nature, relieving suffering and preventing deformity by means of mechanical appliances, but he very frequently fails to obtain the best results by continuing his mechanical treatment when a surgical operation is clearly indicated. He too frequently allows a tuberculous abscess in an epiphysis to break through into a joint and destroy it when an operation would have saved it. He often allows tuberculous abscesses to burrow extensively when they could be better treated by surgery. He pulls and stretches for months at contracted muscles and tendons by mechanical means when a knife would overcome the deformity in a few minutes. He often allows patients to go on from bad to worse under conservative treatment until they die from exhaustion or general tuberculosis, when timely erasions, excisions or amputations would have restored them to health.

If from a surgical standpoint we thus condemn the conservative for his sins of omission, how much more must we condemn the radical for his sins of commission; for the former is not a surgeon in the common acceptance of the term, while the latter is classed as one because he is constantly performing operations. The radical is one who believes that operations are the whole of surgery and that any one who can secure primary union of wounds most of the time is a surgeon. His existence is due to the fact that our modern technic makes it possible to invade all parts of the body with impunity. He often announces himself as a specialist in surgery without having had sufficient training to justify any such step, and too often secures patients by dividing fees with that class of practitioners who have a higher regard for their own pocket-books than they have for the welfare of their patrons. He frequently performs unnecessary and even unwarrantable operations, and often when an operation is indicated fails to relieve the patient of his suffering because the surgeon's ignorance and inexperience prevent him from recognizing pathologic conditions or from removing them when found. He classes every operation from which the patient recovers as successful, regardless of whether any good has been accomplished or not. Every surgeon is consulted by a host of people who have been advised by the radicals to submit to all manner of operations for which there is no indication and for which very frequently positive contra-indications exist. The radical, for want of surgical training and experience, as a rule, does not perform radical operations. He is very apt to remove the stones from the gall bladder and leave those in the common duct. He removes the prominent part of a malignant growth, leaving the outlying parts and the neighboring lymphatic glands. The sins committed by the radical are legion, but time will permit mention of only the most common ones.

Gastroenterostomy was recently spoken of by an eastern medical man as "that great western fake," because it has been performed for all manner of stomach symptoms, when stenosis did not exist or when the operation could not rationally be expected to do any good. Every surgeon knows of some unfortunate victims who regret that the operation was not fatal, because it not only failed to relieve the original symptoms but caused many new ones by disturbing Nature's anatomic and physiologic arrangements.

The floating kidney is often anchored when, because of a general ptosis of the abdominal organs, there is no possibility of relief.

The radical surgeon frequently removes the appendix for insufficient reasons because it is such a common offender that people are very ready to accept a diagnosis of appendicitis on a very small array of symptoms.

It is no longer popular to remove ovaries for every pelvic pain, but many healthy or but slightly damaged tubes are being sacrificed on the altar of radicalism.

Plastic operations on the uterus and vagina, which can be so helpful when indicated and properly performed, are being discredited by imperfect and unnecessary operations.

This is not the wailing of a pessimist, but it is a note of warning from an optimist who hopes for better things and would like to see them brought about through the influence of the medical profession. Surgeons, no matter how honest and scientific they may be, can not bring about this reform alone, for their motives are apt to be misconstrued by the very ones they would help. With the aid of their best friends, the honest scientific physicians, however, it should be possible.

Medical men are only human beings and perfection can not be expected of them, but they have the health and lives of the people under their care and should therefore attain the highest degree of excellence attainable by man. It is the privilege of every graduate in medicine to aspire to become a surgeon, but the surgeon requires special training and no one should be allowed to practice surgery who has not had this training, for it is within the reach of all. A few weeks in a postgraduate school will not make a surgeon any more than it will make any other specialist, but there are plenty of openings in hospitals and as assistants to enable every man who so desires to obtain the required training. It is a deplorable fact that such a spirit of commercialism pervades our western colleges that it is difficult to fill these places satisfactorily. The graduates all want to begin practice at once and most of them want to do surgery.

We all know that evils do exist in the profession, and as a duty to ourselves as well as to the community we should give them publicity and stamp them with our disapproval. We of the profession have made no effort to conceal them, but have assumed the same attitude toward offenders within the profession that we have toward those outside, feeling that when the laity insist on being imposed on, we can not help it; but we, by virtue of our superior knowledge, have no right to allow them to be imposed on even when they insist. Our tolerant attitude is no longer tenable because these evils are growing, and unless we are outspoken in denouncing them the whole profession will be condemned for the sins of the few. When the laity wake up, as they surely will in the near future, they are liable to have drastic laws enacted which will overshoot the mark and be a serious handicap to legitimate surgery. It behooves the profession, therefore, to give these grave matters careful consideration and to map out a definite course for their suppression. A mere hue and cry will do no good, but will only lead to controversy and discredit.

It is much easier to point out evils than to suggest remedies for them; but when the profession does take concerted action in these matters the question naturally arises: Shall we undertake to control them by legislation or by education? The tendency at the present time is to control everything by legislation, and the consequence is that we have more law and less justice than ever before. Our Minnesota law governing the practice of medicine is considered one of the best, and it has been a most potent influence in raising our educational standards; but it fails to protect the public from those within the profession whom, for want of a better name, I have designated as "radicals," and from those outside the pale whom we term "quacks." High-minded men who wish to enter our medical societies and to have professional standing go before our Board of Medical Examiners for license to practice, and many of them fail; but the quacks begin practice without any such formality and the board seems to be unable to stop them. The quacks are beyond our jurisdiction and we should not be held responsible for them; fortunately for mankind, they rarely undertake surgery. The offenders within the profession are often a greater menace than the quacks because of their greater undertakings, and for these we should be held responsible until we have exhausted every possible means for their control. Laws have been successful in requiring a diploma before granting a license to practice, so that it is now practically impossible to practice without one. It would seem, therefore, that laws requiring, in addition to the degree of M.D., a definite amount of experience either as hospital interne or as an assistant, before license to perform major operations is granted, would be helpful, and such laws would come with better grace through the influence of the profession than from outside. Such laws would wrong no one, but, on the contrary, would be helpful to all, for surely any one undertaking surgery can practice it more successfully for himself as well as his patient after he has had proper training. Such additional laws would doubtless be helpful, but it would be better to secure the desired end by making the necessary training a part of the college course. Every medical college now requires so much laboratory work that it takes half a student's time, leaving him very little more time to study the practice of medicine and surgery than he had when the requirement for graduation was but two years. Life is short and a man can not afford to spend any more time in college for theoretical training than is now required by our high-grade institutions, but he can well afford the time for practical hospital experience, and if he will not choose this as an elective it should be made obligatory.

The matter of fee-splitting may not be a crime, but it is based on deception and offers a premium on incompetence. When this is the basis on which a case is referred, the question in the mind of the one who refers it is not, "Who is the most competent man to whom I can refer this confiding patient?" but "Who will give me the biggest rake-off?" It is not, "Who will give the patient the best return for his money?" but "Who will put most of this patient's money into my pocket without my having earned it and without his knowledge?" This is not a matter for legislation, but is one to be controlled by medical societies and through education of the rising generation of medical men. Our medical organizations should be so perfected that any one who makes merchandise of his patrons can no longer have the semblance of respectability in the profession. We all know who do this; why not be outspoken about it? Why not separate the sheep from the goats? Publicity is the surest cure.

It is our duty to teach our students and young practitioners that this practice is morally wrong; that the teachers and practitioners who are held in the highest respect by the profession are not guilty of this practice, and that they who are entering on professional life must not be if they hope to be classed with the leaders; that it is not a good business proposition because it is based on duplicity which is sure to become known sooner or later. We should teach our students practical ethics, not an obsolete, impractical, written code, however altruistic it may be, but the "golden rule" which always has been and always will be practical.

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ELECTIVE CESAREAN SECTION *

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It is proposed to discuss in this paper the Cesarean section as an operation of choice, and more especially the advisability of performing this operation on patients who are usually delivered by so-called minor operations or by unaided natural forces after prolonged labor.

In reaching correct conclusions, the mortality and morbidity of both the child and the mother are the important factors. Heretofore too little attention has been paid to the life of the child, and too little to the morbidity of both the mother and the child.[1] This is a question not only of motherless children, but a question also of invalid mothers and idiot children. That a mother gets through labor with her life and that the babe be born alive is not sufficient. The aim should be to conduct the labor so that neither shall be harmed thereby. There must be nothing in the labor *per se* which will prevent the mother from complete recovery or the child from developing into a normal human adult.

Let us first inquire as to the infant and maternal mortality attending the high application of the forceps, version and extraction of the child, the induction of premature labor, and the expectant plan in women with narrow pelves. Forceps, version and induction of premature labor, according to Zinke,[2] result in a maternal mortality of 10 per cent. and a fetal death rate of 50 per cent. Reimann[3] says that with proper precautions the high application of forceps results in no maternal mortality and in a fetal mortality of 10 per cent. E. P. Davis[4] places the maternal mortality at 58 per cent. and the infant mortality at 15.63 per cent. He says that "the high application of the forceps is especially dangerous for the child in contracted pelvis." In the Breslau clinic the high application of the forceps showed no maternal mortality which could be traced directly to the use of the forceps, but a fetal mortality of 31 per cent. *Induced labor in this clinic resulted* in a maternal mortality of zero and a fetal mortality of 28 per cent. In the Berlin, St. Petersburg and Budapest clinics the maternal mortality in high forceps ranges from zero to 6.5 per cent. and the fetal mortality from 20 to 30 per cent. According to Lusk,[5] the fetal mortality in "slightly contracted pelves" with spontaneous birth is 13 per cent., while Playfair[5] puts it at 20 per cent., and Schroeder says that *if the contraction is enough to indent the head of the child 50 per cent. will die. Version in contracted pelvis gives, according* to Nagel (quoted by Hirst[6]) a fetal death rate of 25 per cent. or more. According to Hirst[6] the induction of premature labor two to four weeks before the expected termination of pregnancy in patients with a conjugate diameter not lower than 9.5 cm. entails no additional risk to the child if conditions are such as to permit it to have the best care, and is followed by no maternal mortality in his experience in private practice. He calls attention, however, to the fact that in the discussion *which occurred at the International Congress* in Amsterdam in 1899 the maternal mortality was acknowledged to be 1 per cent.. and the infant mortality was given by Barnes as 33 per cent., by Bar and Herzman as 26 per cent., and by Becker and Black as 50 per cent. In cases of normal pelvis the fetal mortality following the use of forceps is, according to Leisenwitz[7] (quoted by Davis in the article already referred to), 14.28 per cent. Leisenwitz also states that he found practically the same results following use of forceps *with the head in the pelvic cavity and at the brim.* Eliminating all but mechanical complications, he found a fetal mortality of 10.68 per cent. and a maternal mortality of 0.58 per cent.

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* Read before the Southern Surgical and Gynecological Association, St. Louis, Dec. 16, 1908.

[1] I regard craniotomy on a living viable child (unless it be a monster) as an entirely indefensible procedure, the opinions of Katz, Pfannenstiel, and others (mostly Germans) to the contrary notwithstanding.

[2] President's address at twenty-first meeting of Am. Assn. of Obst. and Gynec., Baltimore, Sept. 22, 1908.

[3] Prog. Med., September, 1908.

[4] Prog. Med., September 1908.

Let us now consider the question of morbidity of mother and child in this same class of cases. Again we turn to Davis' review of the literature in *Progressive Medicine,* and find that Leisenwitz says that 73.6 per cent. of the mothers were injured to such an extent as to require suture, the injuries including those to perineum, *bowel and bladder. Aside from fractures,* the percentage of which he does not give, he found that 5.45 per cent. of the children had facial paralysis and 1.15 per cent. had paralysis of a nerve plexus.

Riemann[8] gives the particulars of the use of the high forceps in 100 cases in Baumm's clinic. Of the women, 16 per cent. had a febrile puerperium and in 7 per cent. there was serious injury of some kind, while of the children 22 per cent. were born dead and 10 per cent. were seriously injured. Instrumental interference is assigned *by Suttleworth*[9] as the cause of idiocy in 29 per cent. of the cases admitted to the Royal Albert Asylum. Down[10] says that in 20 per cent. of 2,000 idiots examined by him there was evidence of suspended animation at birth. Crichton Browne[11] also emphasizes protracted and abnormal labors as a cause of idiocy and other mental diseases. An examination of the birth records of the Indiana School for Feeble-minded Youths, kindly made for me by Dr. H. K. Mouser, shows that the percentage of difficult labors in 727 cases in which the birth record is given is 11.69, including *all the grades*, and of the epileptics there is a history of difficult labor in 17.64 per cent. of the cases. The investigations of Carmichael[12] and others show that cerebral hemorrhage in the newborn is due not to instrumental aid in delivery, but to the conditions which made such aid necessary. Of 14 cases of cerebral palsy studied by Carmichael, in all but 2 the labor was long, and in 8 there was marked asphyxia. He regards asphyxia as the existing cause and cranial compression as the contributory cause.

As *pointed out* by Frazier,[13] if these children recover from the immediate effects of the hemorrhage they al*most invariably* suffer permanent physical disability, and it is said that in 30 per cent. epilepsy develops. McIlrath[14] found that of 250 cases of infantile convulsions. abnormal labor was the cause in 10 per cent. Kulnig, Gowers and others have emphasized the close relationship between congenital palsies and epilepsy, which, taken together with the close relationship known to exist between birth injuries and congenital paralysis, *increases the importance of prolonged and difficult labor* as a cause of epilepsy.

Summarizing the foregoing figures, we find that the average maternal mortality resulting from high forceps, version, induction of premature labor and expectancy as given by fifteen authors is 1.14 per cent. and the fetal mortality 17.3 per cent., while from these same figures we find that there was serious maternal morbidity in 42 per cent. and a serious fetal morbidity of 12.3 per cent., not including the fractures of the skull in Leisenwitz's figures.

It is well to recall here the opinion of Frazier, above noted, that the children who recover from cerebral hemorrhage invariably suffer permanent physical disability, and that in 30 per cent. epilepsy develops.

Through private correspondence I have collected from thirteen operators reports of 126 cases of elective Cesarean section done on uninjured, uninfected, unexhausted women. Four were done for tumor of the pelvis: the tumor was removed at the same time the Cesarean section was done in 3 cases, and in 1 this point is not covered in the report. Six were done for placenta prævia, 3 for eclampsia, 1 for rigidity of soft parts in a priminara, 1 for uterine distortion due to ventrofixation. The remaining 110 were done for contracted pelvis. In this series of cases there were 4 maternal deaths (3.1+ per cent.), 4 fetal deaths (3.1+ per cent.), 17 cases of morbidity in the mothers (13.49+ per cent.), and no fetal morbidity.

Summarizing these figures, as was done in those given concerning forceps, version, etc., and eliminating 4 fetal deaths which were in no wise due to the operation, and 2 maternal deaths due to uremia, but including 1 maternal death following the removal of a tumor plus Cesarean section, which death might with equal fairness be attributed to the removal of the tumor, and we find that we have a maternal mortality of 1.58 per cent. for Cesarean section, as compared with a mortality of 1.14 per cent. for high forceps, version, etc.: a fetal mortality of zero for Cesarean section, as compared with a mortality of 17.3+ per cent. for high forceps, version, etc.; *while the maternal* morbidity in Cesarean section is 12.69 per cent., as compared with a maternal morbidity in high forceps, version, etc., of

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[5] Dorland: Modern Obstetrics, p. 572.

[6] Text-Book of Obstetrics, p. 516.

[7] His conclusions are based on a study of 27,238 labors, in which the forceps were used in 2.55 per cent. of the cases.

[8] The Journal A. M. A., 1907, xlviii, 2082; abstr. from Monatschr. f. Geburtsh. u. Gynäk., xxv, 1554.

[9] Brit. Med. Jour., Jan. 30, 1886.

[10] Tr. Obst. Soc. London, December, 1876.

[11] West Riding Lunatic Asyl., i and ii.

[12] Scottish Med. and Surg. Journal, June, 1906.

[13] Prog. Med., March, 1907.

[14] Prog. Med., March, 1908.

42 per cent.: and the fetal morbidity in Cesarean section is nil as compared with a fetal morbidity, in many instances worse than death, of 12.2 per cent., excluding the skull fractures in Leisenwitz's cases. These cases have been tabulated, and the table is appended, as it contains some details which are not mentioned in the paper.

The possibility of error in drawing conclusions from so small a number of cases (126) is fully recognized, but inasmuch as the mortality and morbidity as arrived at from these cases agree closely with the opinions of a large number of men of experience on these same points, I think that the deductions above given may be regarded as practically correct.

In recent private letters the Mayos, Newell, Price, Hirst, Dorsett, and Grandin express the opinion that Cesarean section done under favorable circumstances by competent operators should give practically no mortality nor morbidity. Condon places the maternal mortality at 2 per cent. The following are some of the opinions expressed in personal letters to me:

Lynds of Ann Arbor says: "It would seem as though the operation (Cesarean section) done under fairly favorable circumstances is comparatively safe and possi-

TABLE OF INDICATIONS AND RESULTS IN 170 CASES OF CESAREAN SECTION*

Name of Operator.	Cases.	Indications.	Deaths, Maternal.	Deaths, Infantile.	Morbidity, Maternal.	Morbidity in Child.	Remarks.
J. G. Lynds, Ann Arbor.	3	Placenta prævia, 1; narrow pelvis, 1.	0	0	?	?	One patient since confined and again pregnant.
J. B. DeLee, Chicago.	10	Mechanical disproportion, 13; Vag. stenosis antefixation, P. prævia, pelvic tumor, each 1; eclampsia, 2.	2	2	9	0	Two stitch abscesses; 4 mothers had fever, 1 had jaundice, 1 temporary ileus, 1 had hernia following second section. Operated second time on 2. One death from eclampsia. The patient in one tumor case died. Fetal deaths, 2, 1 due to ignorant assistant, and 1 child was diseased at birth from hypotrophidism in mother.
W. J. and C. Mayo, Rochester, Minn.	2	Not given.	0	0	0	0	
J. H. Carstens, Detroit.	5	Pelvic deformity, 4; tumor, 1.	0	0	0	0	
W. A. Newman Dorland, Philadelphia.	2	Immature mother, 1; rachitic pelvis, 1.	0	0	0	0	
J. F. Baldwin, Columbus, O.	10	Contracted pelvis.	0	0	0	0	One pair twins.
S. J. Goodwin, Columbus, O.	1	Contracted pelvis.	0	0	0	0	
E. H. Grandin, New York.	3	Not given.	1	0	0	0	Death due to uremia.
Joseph Price, Philadelphia.	4	Malformation, 3; eclampsia, 1.	0	0	0	0	
E. P. Davis, Philadelphia.	44	Disproportion between child and mother.	1	0	5	0	One hematoma. One odorous vaginal discharge. Three stitch abscesses. Silk for sutures and ligatures. Death due to peritonitis of unknown source. Two patients delivered second time, and in both hysterectomy done.
Miles F. Porter, Fort Wayne, Ind.	2	Pelvic tumor, ovarian, 1; placenta prævia, 1.	0	0	0	0	In the tumor case patient was multipara, but after delivery of tumor it was thought better to deliver child by section. This woman has since been delivered normally. In the placenta prævia case the patient was primipara operated after only two vaginal examinations, and after one fairly free hemorrhage. Dr. L. P. Drayer was the physician in charge in this case, and it was he who made the diagnosis and advised the operation, and to him belongs the credit for the fact that this patient is to-day the mother of a hearty baby.
A. P. Condon, Omaha.	5	Placenta prævia, 3; fibroid, 1; narrow pelvis, 1.	0	2	?	?	One child lived 18 and 1 48 hours after delivery; 1 delivered at 7 months. One placenta prævia patient has since been delivered normally.
F. S. Newell, Boston.	26	Rigid soft parts, elderly primip., 1; disproportion, 25.	0	0	3	0	In 3 cases the operation performed was the second or third section; 2 other patients were subsequently delivered by section by other operators. One patient had ether pneumonia, 1 a phlebitis, and 1 had eclampsia and during convulsion opened wound and extruded bowels, but recovered.
E. G. Zincke, Cincinnati.	7	Rachitic dwarf, flat rachitic pelvis, kyphoscolic-rachitic pelvis, each, 1; cicatricial contraction, and generally contracted pelvis, each, 2.	0	0	0	0	One patient subsequently delivered with aid of induced labor at thirty-fourth week. Both mother and child living.
Rudolph W. Holmes, Chicago.	4	Contracted pelvis in all.	0	0	1	0	Second successful section done in one case.
E. J. Ill, Charles Ill, Dr. Gunther, Newark, N. J.	33	Ventrofixation, 5; carcinoma, 1; contracted pelvis, 11; eclampsia, 13; myofibroma, 1; Cic. contraction vagina, 1; artificial anus, 1.	6	9	?	?	Of the maternal deaths, 1 was due to sepsis present at the time of the operation, which was done after forceps and version had both been tried and failed, 2 were due to eclampsia, which was the indication for which the operation was done; 1 death from sepsis occurred in a case of deformed pelvis with albuminuria; 1 death occurred in a patient operated on for concealed hemorrhage with cicatricial contraction of the vagina, and 1 in a case of narrow pelvis in which the cause of death is not given. Of the fetal deaths, 7 occurred in utero, and the remaining 2 in children born of mothers in eclampsia. One woman who was operated on twice, and who, prior to the first section, had been delivered 4 times of still-born babies, has 2 living children. One of the women operated on has since been confined twice normally, and 1, once.
Total	170		10	13	18	0	

* With the addition of reports from Drs. Zinke, Ill, and Holmes, received after the paper was written.

bly should be done for placenta prævia oftener than it is done at present."

Hirst says: "As between high forceps and version in primiparæ, and Cesarean section, the expert abdominal surgeon would get the best results with the last, even though he were also an expert in the other operations; but this would not apply, of course, to the general practitioner."

Newell of Boston, speaking of Cesarean section, says: "In the first place the elective operation done before labor, in the absence of complicating disease, with the patient in good condition, is, in competent hands, a safe surgical procedure, and I believe the morbidity in these cases is very slight and certainly very much less than could be claimed for the ordinary obstetrical operation in the same class."

De Lee thinks that "Cesarean section ought to have a wider field and should replace many of the brutal forceps and version operations."

According to Davis, "Elective Cesarean section by competent operators, on uninjured and uninfected patients in good condition, gives at the present time the best chance of life and health to mother and child in cases where mechanical disproportion or physiologic incompetence to endure labor are markedly present."

Eliminating those deaths for which the operation was in no way responsible, we find that the maternal mortality of Cesarean section in Schauta's[15] clinic is 2.85 per cent. Kerr's[16] mortality is 6.6 per cent. in 30 cases, Leopold's[17] 4.9 per cent. in 229 cases, while 80.8 per cent. of the children thus delivered lived to be 8 years old. Wallace[18] reports 15 cases with neither fetal nor maternal mortality. He has done 16 operations in all, in 1 of which the patient died from sepsis due to attempts at delivery before section was done. Zinke, in his paper above referred to, says: "Zweifel is credited with 55 Cesarean sections with the loss of only 1 mother, Schauta with 111 Cesarean sections and but 1 maternal death. The latter operated 75 times for relative indications and all mothers lived." Dr. Zinke, in a private letter, reports 7 clean cases of Cesarean section without a death. His maternal mortality in high forceps is 8 per cent., in prophylactic version 3 per cent. His fetal mortality in those operations is 12 per cent. and 23 per cent. respectively, and the maternal morbidity 40 per cent. and 35 per cent. Further proof of the facts deduced from the cases in the table is unnecessary.

As for maternal morbidity in such cases, there can be no doubt that it is less after Cesarean section than after the other methods of delivery under discussion. So far as concerns the child there is no method of delivery which subjects it to as little risk as does Cesarean section.

In the treatment of placenta prævia, version, metreurysis and the use of Bossi's dilator are the methods preferred at present. Bossi's dilatation has failed to reduce either maternal or fetal mortality, and adds materially to morbidity of the mother as compared to other methods of dilatation. According to Zinke, the various methods above mentioned result in a maternal mortality of 8 per cent. and a fetal mortality of 70 per cent. Hirst places the fetal mortality at 50 per cent. Holmes,[19] in a paper in which he attempts to show that Cesarean section is improper in placenta prævia, gives the fetal mortality under so-called obstetric treatment as 54.1 per cent. and the maternal mortality as 7.36 per cent. He further states that Cesarean section in placenta prævia has reduced the fetal mortality 30 per cent., but has raised the maternal death rate threefold.

Let us stop for a moment to weigh those statements. In estimating the value of the child's life as compared with the mother's, it is entirely proper to consider the fetal deaths that occur within a few days or less than two weeks after the delivery, but to attribute those deaths to the operation *per se* is wrong and misleading. In deciding the method to be pursued it is also necessary to consider the maturity and vigor of the child, but these questions should be kept separate and distinct from risks to the mother and child from the methods of delivery themselves if we are to arrive at correct conclusions. I take it that one would be justified in adding a very slight risk to the mother's chances by choosing a method which would entail no risk to the child, in preference to a method under which the child would have less than once chance in two of being born alive, and would add little or nothing to the mother's chance of recovery. It can be proved by the statistics at hand that no method of delivery gives the immature or weakly child so good a chance to live as does Cesarean section. In the 126 cases of Cesarean section which I have collected and made use of in the first part of this paper there were only 4 fetal deaths, and not one of them in the remotest way due to the method of delivery. According to those same statistics, the maternal death rate in Cesarean section all told is 4 in 126 cases, or 3.17 per cent. One of those deaths was due to eclampsia and one to uremia, leaving 2 deaths in 126 cases, or 1.58 per cent., due to the operation—a death rate of less than one-fourth of that given by Holmes for "obstetric" methods.

Macan, in his paper read before the British Medical Association[20] on "The Treatment of Accidental Hemorrhage," says that "from his personal experience he is entirely in favor of preferring Cesarean section in these cases in preference to rapid dilatation of the cervix." "He would favor vaginal Cesarean section." In the discussion which followed the reading of this paper, Kerr of Glasgow and Byers expressed themselves as in favor of Cesarean section, while Galabain "thought that Cesarean section might in some cases increase shock to a fatal issue." Rupture of the uterus in subsequent pregnancies, adhesions and hernia are remote results said to follow Cesarean section that must be considered if we arrive at correct conclusions.

Werth[21] has had 1 case of rupture of the uterus following Cesarean section and has collected reports of 11 others. Prüsman[22] had 1 case occurring in a woman who had been delivered twice by Cesarean section. He says that the mucosa had grown into the cicatrix. His patient was saved by operation. Prüsman says that when his paper was written (1905) but 7 other cases had been recorded. In Davis' review of the literature of uterine rupture[4] appear abstracts of articles from four reporters, giving their personal experience in 29 cases, and from a paper by another in which the statistics of 97 cases are given, and in no case is a previous Cesarean section given as a cause for the rupture. Dr. Zinke informs me in a personal letter that he had had one patient on whom he did a Cesarean section who was subsequently successfully delivered by the aid of induced labor at the thirty-fourth week.

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[15] Neumann, J.: Die Sectio Cæsarea an der Klinik Schauta, The Journal A. M. A., 1906, xlvii, 973; abst. from Arch. f. Gynäk., lxxix, No. 1.

[16] Am. Jour. Med. Sc., September, 1906, 174.

[17] Prog. Med., September, 1908.

[18] The Journal A. M. A., Apr. 13, 1907 abstr. from Practitioner, London, March, 1908

[19] Holmes, R. W.: Cesarean Section for Placenta Prævia an Improper Procedure, The Journal A. M. A., May 20, 1905, xliv, 1594.

[20] Am. Jour. Med. Sc., cxxiv, 360.

[21] The Journal A. M. A., 1905, xlv, 879, abstr. from Berl. klin. Wchnschr., xlii, No. 27.

[22] The Journal A. M. A., 1905, xlv, 1124, abstr. from Ztschr. f. Geburtsh. u. Gynäk., lv, Olshausen Festschr.

I have had one patient, a primipara four and a half months pregnant, from whom I removed a large uterine fibroid which necessitated damage of the uterine wall down to the mucosa over an area larger than the palm of the hand, who delivered herself naturally at term of the child which she was carrying at the time of the operation, and who has since been normally delivered twice.[23] I also had another patient on whom I did a Cesarean section following the removal of an ovarian cyst, and who has since been delivered without accident. It is well to recall just here that rapid dilatation is much more likely to produce rupture of the uterus in placenta prævia than in cases of normal implantation, because of the increased friability of the uterine tissues at the placental site as compared with the tissues at a distance. Davis[4] has had 1 fatal case following the use of Bossi's dilator. Winter (quoted by Davis[4]) reports 4 cases, 2 of which were fatal. In 1 spontaneous expulsion occurred after version, in 1 version and extraction was done, in 1 the child was expelled largely by abdominal pressure after version, and in the other five minutes were occupied in bringing the head through the cervix. Lea[24] reports a fatal case in which version and extraction of a seven months' fetus was done.

Considering the sparsity of cases of rupture of the uterus reported as following Cesarean section and myomectomy and the results of muscle suture in general, the conclusion seems warranted that the danger is so slight that it may be disregarded, save in cases of unusual obstruction to the passage of the child due to narrow pelvis, large child, or other cause, in which cases subsequent pregnancies should be prevented by removal of the tubes, or a Porro operation, or the woman should again be delivered by Cesarean section, as the exigencies of the case demand.

So far as concerns adhesions, it may be said that, because of the size of the uterus immediately following delivery, they are more likely to form between this organ and the abdominal wall after Cesarean section than after any other operation save ventrosuspension or ventrofixation, but that troublesome adhesions are likely to form after section, there is no reason to believe.

The accumulated experience of competent operators warrants the assertion that the danger of hernia is practically nil. That the danger of Cesarean section is not materially increased by some hours of labor in the absence of infection, I am convinced. That infection increases the danger of Cesarean section more than it increases the danger of obstetrical operations is not proved. Hirst (who has done 80 Cesarean sections, with 5 deaths), in his letter says: "My recent experience convinces me that Cesarean sections may be done with impunity after hours of labor, if the woman is not infected and the technic of the operation is as good as it ought to be; the mortality even in infected cases need not necessarily be excessively high."

We are warned by many writers that there is danger of having unnecessary Cesarean operations if we emphasize the lack of danger in favorable cases. This danger is a real one, perhaps, but that it is as great as is that arising from the all-too-prevalent notion that high forceps, version and other obstetric operations require no particular skill lacks proof.

The point I wish to make here is that the so-called obstetric operations require for their proper conduct just as much skill as does Cesarean section. Indeed, I am of the opinion that the inherent difficulties of the obstetric operations are greater than are those of Cesarean section. All the operations under consideration require skill and judgment, and it is little short of criminal for one who is not possessed of both to undertake any one of them.

The following conclusions are presented:

1. In patients with contracted pelves, Cesarean section should supplant the obstetric operations in many cases and practically always in primiparæ.
2. In placenta prævia centralis Cesarean section should be the operation of choice if the child is viable.
3. In eclampsia occurring at or near term in a first pregnancy, Cesarean section is the best method of delivery, except in cases where the child is relatively small, or the vagina and pelvis capacious, when Dührssen's operation might be given the preference.
4. Women requiring abdominal section at term for the removal of uterine or ovarian tumors should be delivered by Cesarean section immediately before or after the tumor is removed.
5. In the case of an elderly primipara at term with a vigorous child, with a normal pelvis, but with rigid soft parts, who is unusually sensitive to pain, whose nervous equilibrium is unstable, and whose physical condition is below par, Cesarean section done before labor has begun or at its very beginning offers a better chance of life and health to both mother and child than the so-called conservative operations.[25]
6. It is not to be forgotten, of course, that one of the chief arguments in favor of Cesarean section as against other operations is the fact that it entails no risk to the child; hence, in case of a dead or dying child this argument carries no weight and, therefore, it will not infrequently happen that because of a dead or dying child a conservative method will be better in a case which, were the child vigorous and viable and the other conditions the same, Cesarean section would be the better method.

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THE INFLUENCE ON THE NOSE OF WIDENING THE PALATAL ARCH.[*]

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The relation between nasal obstruction and malformation of the jaws and teeth has long been considered by both the dental and medical profession.

Only recently has the proper attention been given to the removal of nasal and postnasal obstruction before correcting deformities of the jaws and teeth. To-day there is much written on this subject, and general practitioners of medicine are referring their little patients to specialists practicing rhinology and orthodontia.

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[23] Ann. Gynec. and Pediat., February, 1902.

[24] Am. Jour. Med. Sc., cxxx, 360.

[25] In this connection I refer the reader to Newell's paper (Am. Jour. Med. Sc., October, 1908) on The Effect of Overcivilization on Maternity, which was not published until this paper was well along. The class of patients referred to in conclusion 5 of my paper do not always belong to the "overcivilized" class.

[*] Read in the Section on Stomatology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

The patients are sent first to the rhinologist and then to the dentist. This I believe to be the proper procedure if there is an obstructive lesion in the nose, or the nasopharynx. There is, however, a very common class of cases in which there is an intimate relation between the nose and the palatal arch, the proper treatment for which is not always given due consideration.

I refer to those cases in which there is constriction of the nares, with a narrow palatal arch, without a pathologic obstructive lesion in the nose. With many of the cases in the class first mentioned where nasal or postnasal obstruction exists there is also a lack of development of the nasal bones that has much to do with imperfect nasal breathing. What I have to say about the second class of cases, that is, those without obstructive lesions in the nose or nasopharynx, with normal turbinates, applies also to the class of cases just mentioned.

In order that there may be no misunderstanding regarding the kind of cases I place in my second group, let me describe a condition illustrating it, which is not infrequently seen in practice. The patient comes with a complaint of never having breathed well through the nose. Examination of the nose shows turbinates normal in size and structure, septum slightly deflected, as is usually the case in all noses, or markedly deviated, no exostoses, but the inferior turbinates pressing against the septum, or against the floor of the nose, or usually both, which is, of course, an abnormal condition. Adenoids may be present, but their removal does not give the usual relief. The palatal arch is constricted, and, of course, there are malpositions of the teeth.

I have patients fifty years of age with the conditions above described, who have never had proper nasal respiration, and in whose cases no operative precedure on the nose is indicated. In many cases like these, turbinates have been entirely removed in the effort to secure breathing space. This procedure, because of its serious sequelæ, is never indicated except for diseased turbinates. The respiratory function of the nose may be lost by such a procedure. Even if performed, it does not give good results so far as the breathing is concerned, because the anterior nares are so slit that in respiratory effort the alæ of the nose are brought against the septum, and nasal occlusion, in part at least, produced.

If the nose is constricted because of a narrowing of its walls, what is the rational therapy? The only answer possible is this: The nasal walls should be separated and the cavities thus widened.

This can be accomplished in only one way, and that is by widening the palatal arch. That the nose is widened by this procedure we all know. We have all had patients who have told us that widening the arch has improved nasal respiration.

Notwithstanding this well-known fact, I doubt if a great number of patients are referred to the dentist for preliminary widening of the arch before attempting to improve nasal respiration by septum operations or other intranasal operations. These measures are rather resorted to first, and the patient sent to the dentist later.

This is not the correct procedure. If the case is not a typical case of the second class—that is, if there is a pathologic growth obstructing the nose or nasopharynx—this should be removed first, because we should hasten to improve breathing by all proper means, and then widen the arch.

If the nasal operation should take much time, the operation on the palatal arch should be done at the same time. There is no excuse for intranasal work being done in a typical case on a patient with normal turbinates and septum before the orthodontist has accomplished what he can by widening the palatal arch. This procedure is one I think we hear too little about.

It is well-known that a dentist should send his patients with nasal obstructions to the rhinologist. It is equally important that the rhinologist send every patient with contracted arch to a dentist.

For many years it has been my practice to send all my younger patients suffering from interference with nasal respiration to the dentist. I believe that this should always be done. Even if the palatal arch is not constricted, there may be other conditions which, if relieved in time, will save the patient great annoyance in years to come.

I have found it exceedingly difficult to measure in the living subject the increase in size of the nares secured by widening the palatal arch. There is no question but that it occurs. With the widening of the nose and consequent increase of nasal respiration the turgescence of the mucosa so common in constricted noses is improved and the breathing still more benefited.

Wishing to ascertain the actual change that may be made in the osseous walls of the nose itself by a widening of the palatal arch, I asked Dr. G. V. I. Brown, of Milwaukee, to widen the arch of a green skull. I made measurements before and after widening, using a very simple instrument, which I believe will serve for intranasal measurements in the living subject.

The following are the intranasal measurements before and after the widening of the palatal arch:

1. Distance across the posterior nares just posterior to the inferior turbinates: before widening, 32 mm.; after widening, 34 mm.
2. Distance across the posterior nares just above the posterior ends of the middle turbinates: before widening, 23 mm.; after widening, 24.5 mm.
3. Distance from the vomer to the outer wall of the nose in the posterior nares half way from posterior end of the inferior turbinate to the floor of the nose on the left side: before widening, 17 mm.; after widening, 18.5 mm.
4. Same measurement on the right side: before widening, 24 mm.; after widening, 24 mm.
5. Distance between the anterior attachment of inferior turbinate in inferior portion of the middle meatus of the same point on the opposite side: before widening, 23 mm.; after widening, 25 mm.
6. Distance between vomer and inferior turbinate at narrowest part of the inferior meatus, left: before widening, 6 mm.; after widening, 7 mm.
7. Same measurement on the right side: before widening, 8 mm.; after widening, 9 mm.

These measurements speak for themselves. Not only is there a widening of the inferior meatus, but of the middle. Consequently the beneficial results are not confined to the respiratory function of the nose, but there is an improvement in the drainage from the sinuses. Pressure in the upper portion of the nose, with its numerous reflex troubles, may be relieved.

The beneficial influence of improvement of nasal respiration in the general condition of patients is well known. I have had patients that have exhibited as much and similar improvement after widening the palatal arch as others have shown after the removal of adenoids.

12½ South Clinton Street.

THE RELATION BETWEEN DEVIATION OF THE NASAL SEPTUM AND IRREGULARITIES OF THE TEETH AND JAW

FROM A RHINOLOGIST'S STANDPOINT *

NELSON M. BLACK, M.D.
MILWAUKEE

My attention was first directed, in 1899, to the relationship between deflected nasal septums and jaw irregularities by the remarkable effect produced in a patient 33 years of age, who presented a very badly deflected septum with a high vault and laterally contracted V-shaped, upper maxilla. The application of a regulating apparatus to bring about proper occlusion of the teeth to secure better mastication of food resulted in the marked relief of the nasal stenosis in regard to which she consulted me.

This led to investigation as to the etiologic factors in the production of deformed nasal septums, with the result of fully convincing me that not only are dental and jaw irregularities a decided factor in the production of deflected septa, but that the complete relief without possibility of return of this distressing condition, when found in conjunction with dental deformities, can be brought about only by first correcting the deformity existing in the superior maxilla.

The etiologic factors producing septal deflection and dental and jaw irregularities are compared in the following tables:

ETIOLOGY OF SEPTAL DEFLECTIONS	ETIOLOGY OF DENTAL AND JAW IRREGULARITIES
PREDISPOSING FACTORS	PREDISPOSING FACTORS
Heredity. Racial characteristics. Admixture of racial types. Some defects in primary laws of organization. Diathetic or constitutional disorders: Rachitic. Syphilitic. Tubercular. Traumatism: In utero. During delivery. During early childhood. Inflammatory processes in nose weakening structure. Local and general malnutrition. Infectious diseases. Disease of the teeth. Degeneracy.	Heredity. Racial characteristics. Admixture of racial types. Some defects in primary laws of organization. Diathetic or constitutional disorders: Rachitic. Syphilitic. Tubercular. Eruptive or infectious diseases. Local and general malnutrition. Mouth breathing. Disuse. *Habits:* Thumb sucking. Biting lower lip. Resting tongue between upper and lower lip. Degeneracy. Perverted cell action.
ACTUAL FACTORS	ACTUAL FACTORS
Malocclusion. Traumatism: In utero. During delivery. During early childhood. At any period of life. Local and general malnutrition. Mouth breathing.	Maloceulsion. Premature loss of deciduous teeth. Prolonged retention of deciduous teeth. Loss of permanent teeth. Tardy eruption of permanent teeth. Supernumerary teeth. Abnormal frenum labium. Mouth breathing.
DEVELOPMENTAL FACTORS	DEVELOPMENTAL FACTORS
Unequal development of the vomer. Underdevelopment of the superior maxillæ. Overdevelopment of superior maxillæ. Non development of septum from disuse.	Overdevelopment of maxillæ. Arrest of development of maxillæ. Neuroses of development of the maxillæ.
FORCE DIRECTLY APPLIED	FORCE DIRECTLY APPLIED
Foreign bodies. Nasal growths. Hypertrophic rhinitis.	Perverted muscular action. Mastication. Cheek and lip pressure. Atmospheric pressure.
FORCE INDIRECTLY APPLIED	
Perverted muscular action. Mastication. Cheek and lip pressure. Atmospheric pressure.	

The etiologic factors above mentioned are all I have been able to gather in the literature of the two subjects at my command, and it will be seen that the majority of factors are common to the two conditions.

A comparison of the tables tends to strengthen the belief that each writer has been justified in his deductions. For instance, in any particular case, some factor was found apparently predominant in the production of the deformity. The author in his eagerness to advance his theory as to the etiology has not given due weight to the other factors which assisted in bringing about the deformity.

Some authors state positively that certain of the factors mentioned are not causative, while others are equally positive that they are.

There is not a shadow of a doubt that the health of the individual is placed in jeopardy by mouth breathing; and it is the consensus of opinion, both rhinologic and orthodontal, that mouth breathing, whatever its cause, must be relieved; also that nasal occlusion (whether it be due to stenosis of the nasal passages or to pharyngeal adenoids) and the teeth and jaw irregularities are as a rule associated to a greater or less degree.

However, the etiology, be it what it may, is of comparatively slight importance. The improvement of the condition of the unfortunate individual is the consideration which demands our attention.

TREATMENT

An unaccountable feature to me in reviewing the literature on septal deflection is the fact that while rhinologists practically as a whole acknowledge the important part which irregularities of the upper maxilla play in the production of septal deformities, they do not apply that knowledge in the treatment of the condition.

Nowhere can I find under the head of treatment any suggestion for the correction of these deformities. It is barely possible that the rhinologists are so taken up with the results obtained by submucous resection (which, it must be conceded, are good), and so confined to their own specialty, as to forget or fail to recognize the importance of contiguous structures.

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* Read in the Section on Stomatology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908. Because of lack of space, the article is here abbreviated by the omission of the portion relative to etiology and the quotations of authorities on dental and jaw irregularities. The complete article appears in the author's reprints.

The fact is, rhinologists as a body do not as yet appreciate the benefits that may be obtained by widening the superior maxilla in nasal obstruction of any nature (even in pharyngeal adenoids) except obstruction due to malignant growths.

Those practicing orthodontia have to a large degree had this fact forced on them in the past apparently by accident, in adjusting dental and jaw irregularities, and it is only the more progressive who have applied or attempted to apply this knowledge with its resulting benefits to their patients.

Dr. D. B. Kyle rightly says that of the many operations for the correction of septal deflection, each was suggested by its author for a particular variety of deflection, and that much discussion and confusion has been caused by the fact that other operators adopt the methods for varieties of deflection to which they are not adapted. The results being unsatisfactory, the method is condemned.

The variety of septal deflections is infinite, and although some authors attempt a classification, no two are alike. From my understanding the same may be said of dental and jaw irregularities. As a result no definite rules can be laid down as to treatment, each case being a law unto itself.

OBJECTS TO BE OBTAINED IN TREATMENT

The objects to be obtained in treatment of septal deflection are: First, to establish free nasal breathing; second, to restore the septum to the median line with its surfaces as smooth and even as possible; third, to equalize the space on either side of the septum; fourth, to leave the septum with mucous covering as little injured as possible so that its function may not be impaired.

The first thought that comes to one on looking into a nose having a septum with a marked deflection is that more space is needed, and that something must be removed to obtain this. There is no doubt that there is seemingly superfluous tissue in the largest percentage of these cases when compared to the nasal space in which they are found, but the fact that the nasal space is much smaller than it should be is, as a rule, not taken into consideration.

The removal of tissue, such as turbinates, thickened portions of the septum, or spurs in overcrowded nares, is beneficial. In many instances, however, the removal of too much tissue, which is a fault with many operators, is a real source of danger. To my mind it is far better to attempt to increase the size of the nasal fossæ first, and then proceed to the removal of any superfluous tissue should it be found necessary.

This can be accomplished, so far as my knowledge goes, only by widening the arch of the superior maxilla. This procedure, to be effective in enlarging the base of the nares, *must be essentially different from the ordinary expansion for the regulation of the teeth in abnormal position.*

Expansion of the maxilla relieves the pressure on the septum, which tends to straighten itself; the breathing space is enlarged and allows the nose to functionate. There is an actual increase in the width of the base of the nose. The volume of air inhaled being increased, the static congestion disappears with a reduction in the size of the turbinate bones, resulting in a further increase in nasal space. Adenoids rarely fail to become rapidly smaller after nasal breathing is established.

This state of affairs should be allowed to continue until no further increase in nasal space is noticed and the turbinated bones have decreased in size as much as possible before deciding if any tissue should be removed.

Several dentists have attempted to widen the upper maxillæ of their patients by a slow torturing process of expansion, which exhausted the patience of the individual long before the desired results were accomplished.

Dr. G. V. I. Brown accomplished the results in the case which first started my investigations along this line. He is the only one with whom I so far have come in contact who succeeds in obtaining the results desired.

How he does it he must explain to you. We differ as to how the result is brought about to a certain extent, and I am afraid that I must concede that his theory is correct; that is, the result is produced entirely by separation of the median palatal suture, which is manifested by the increased space between the middle incisors.

My theory is that in addition to this separation there is a real lowering of the vault, the result of an outward tilting of the alveoli. I do not see how the septum can be so materially straightened, which is the case in practically every instance, unless the vault is lowered and pulls the septum down. As a result the patient is, as a rule, so well satisfied with the increased breathing space and relief from the disagreeable symptoms produced by the stenosis and congestion that he considers operative procedure in the nose unnecessary. This, however, is not always so. In some instances removal of a portion of the turbinated bones or a spur or exostosis or a submucous resection of a part of the cartilage is required.

TIME TO OPERATE

The age at which deflection of the nasal septum begins to make itself manifest is somewhat disputed.

Dr. Talbot says that many septums are deformed before the sixth year. The earliest age I have found given by rhinologists is five years and nine months, observed by Bishop.

Lack says:

> Apparently deviations of the septum may be congenital for Anton saw nine instances in 59 infantile skulls, and other less important similar statistics have been published. Zuckerhandl, however, states that septal deviations very rarely occur before the age of seven and Dr. Keith informs me that he has never seen a congenital deflection. As a matter of clinical experience, all forms of septal irregularities are very rare in children. I never have seen a true deviation under the age of six, but have in a few instances, observed small projections or spurs in younger patients.

Freer gives eight years as the age of the youngest patient on whom he has operated.

Dr. Bogue says:

> If irregularities are found among deciduous teeth, irregularities of the same nature, but still more pronounced, may always be expected in the permanent teeth which are to follow these deciduous teeth. If no perceptible irregularities of the deciduous teeth exist, and at five and one-half or six years no separation of the deciduous incisors has taken place, we are certain that development of the arch of permanent teeth has been arrested and that there will be irregularity of the front teeth, because the permanent teeth, being larger than the deciduous teeth, need a larger arch in which to erupt.
>
> It is not wise to attempt to place on any child the burden of overcoming unaided the conditions just described, of insufficient air spaces, accompanied by insufficient room for dental develop-

> ment. Teeth, if seriously irregular, can never regulate themselves, and noses insufficiently developed always lead to worse evils as the time goes by.
>
> On the proper formation of the palatine arch and the various sinuses depends the resonance and carrying qualities of the voice, and on the accurate formation of the dental arches and the correct occlusion of the teeth depend the power of clear and distinct enunciation and the power of thorough mastication which means insalivation. This is the first step in the digestive process so important to the health and strength of the individual. It has only recently become known that impending defects of the kind here mentioned may be discovered in early childhood and may be remedied while the bones are in a formative state and the teeth are in process of development.
>
> Slight wire arches a little wider in circumference than the dental arches of the child should be placed on the undeveloped arches of deciduous teeth, and be allowed to expand until the proper size of the arch or even a trifle larger than is necessary for the normal development of the permanent teeth is procured. This operation should be entirely painless and should occupy but a few weeks in its accomplishment, but when completed it will be found that the nasal stenosis has at the same time been largely or altogether corrected.

The results of Ziem's experiments in producing nasal stenosis in young animals by occluding one-half of the nose artificially are worthy of note in this connection. These results are that the two sides of the nose and adjacent bone tissue develop asymmetrically, that the obstructed half remains undeveloped, and that this arrest of development extends to all the adjacent tissue on that side of the face.

Dr. Kyle, referring to mouth breathing and its resultant developmental deformities, says that unless perfect nasal breathing is established early in life, that is, before the fifth or sixth year or not later than the seventh, the bony cartilaginous framework becomes so firm that little can be done toward increasing the nasal space for breathing and the individual will of necessity be a mouth-breather for life.

Again taking the rhinologic standpoint, this statement seems reasonable, but from an orthodontal viewpoint the situation changes. Gray states:

> The superior maxilla commences to ossify at a very early period, *but the sutures* between the palate processes persist until middle life.

This being the case, the jaw may be widened at any time before this. The necessary nasal space should be obtained first and then, if necessary, remove superfluous nasal tissue after the effect of partially restored nasal breathing has been observed for a time.

Dr. Faught, in the summary of his paper last year, brought up several points, some of which clinical experience seems to contradict.

1. "The result of ordinary expansion operations on nasal conditions is more dependent on vital tissue in the nasal region than mere mechanical movement." This is true in part. The "ordinary expansion operations" are as a rule not sufficient to produce the desired effect of increasing the nasal space sufficiently, but they do tend to stimulate the nose to properly functionate.

2. "Operations designed mechanically to increase the respiratory capacity of the nasal passage are practically valueless, unless the intermaxillary suture is separated, as shown by increase of space between the central incisors." This is true, and is the very reason why so many dentists fail to obtain relief when operating for nasal stenosis.

3. "It is impossible to relieve stenosis due to adenoids or septal irregularities by expansion methods." Clinical results entirely disprove this assertion.

4. "Adenoids and deviations of the septum should receive the usual treatment at the hands of the rhinologist prior to the correction of dental irregularity." This I believe incorrect, as stated earlier in the paper, with this exception: In cases of marked pharyngeal adenoids their removal is demanded previous to any attempt at regulation of dental deformities as this will aid in development of the face.

Dr. Bryant says:

> The course of treatment to pursue if nasal breathing can be maintained is to straighten the teeth first and operate on the nose later if necessary. If nasal breathing can not be maintained, operate on the air passage sufficiently to allow nasal breathing before regulating the teeth. Then regulate the teeth, and, last of all, do the final work of the nose if any further work is required.

WHY SEPTAL OPERATIONS ARE NOT EFFECTIVE

The great reason why septal deformities tend to return is, in the first place, the difficulty in the removal of sufficient tissue to prevent backward pressure on the septum and a consequent return of the deflection. If two little tissue is removed the result is unsatisfactory. In the second place, the main etiologic factor—that is, some dental or jaw irregularity—is overlooked and goes uncorrected. The main factor in the production of the deformity remains with a lessened resistance in the deformed part with a consequent tendency to return. This was much more frequently the case in the days before submucous resection, but to a certain extent still holds good.

Thus the fact is being forced on us that the conditions, normal or abnormal, of one portion of the head and face are dependent on the condition of other portions. The result is the relation of each of the specialties with the other must be recognized, and specialists, instead of drawing imaginary circles around their respective provinces and saying to themselves, "Thus far must I go and no farther," and to their neighbors, "Thus far may you come and no farther," must accept the results of the study and clinical experience of specialists in other branches and cooperate with them for the good of the patient. The time is past for thinking that in one particular field of medicine or surgery the whole cause may be found; on the contrary, the causative factors may be very complex.

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[The Articles by Drs. Dean and Black Were in a Symposium with Articles by Drs. Talbot and Brown. The Remainder of the Symposium, Including the Discussion, Will Appear in The Journal Next Week.]

PERIPHERAL AND INTRACRANIAL NEUROFIBROMATOSIS

OR FIBROMA MOLLUSCUM, VON RECKLINGHAUSEN'S DISEASE; WITH REPORT OF A CASE *

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Extensive and satisfactory contributions to the literature of neurofibromatosis have been made, particularly from the pathologic standpoint, but the clinical findings in intracranial cases have not been emphasized enough, I think, to be clear even to neurologists. Textbook literature on the subject is decidedly sparse. A short survey of the literature and the summary of an almost unique, but wonderfully illustrative, case, presenting both peripheral and intracranial findings, will be of service.

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* Case reported before Chicago Neurological Society, Nov. 19, 1908.

Not going back to the pioneers in this field, von Recklinghausen, Knoblauch and Soyka, we find the first important work to be the monograph on neuroma by Thomson (Edinburgh, 1900). A valuable feature of his discussion is his subclassification of false neuromata into (1) diffuse and generalized fibromatosis of trunks of nerves; (2) plexiform neurofibromata; (3) cutaneous neurofibromatosis or molluscum fibrosum; (4) elephantiasis neuromatosa; (5) pigmentation of skin and nerve origin; (6) secondary malignant neuroma, being the sarcomatous transformation. To be sure, many cases show characteristics belonging to more than one of these subclasses, our own for instance, clearly coming under subheads 1, 3, possibly under 5, and very probably under 6. These subclasses, however, are not complete according to the discoveries of Henneberg and Koch, Cestan and others; there must be added the group of cases in which the tumors are found in the medullary substance, either white or gray, of either cord or brain.

Adrian,[1] in two articles which cover pretty much the same ground, collects the entire literature and discusses many varieties of neurofibromatosis. In 1903, however, he was able to find but very few recorded cases with intradural complications. Henneberg and Koch[2] present a splendid paper in which intracranial neurofibromatosis is much more satisfactorily discussed. The most recent long article is by Harbitz,[3] but it does not treat of the class of cases in which we are at present interested.

In studying these extensive papers and the various reports of cases which have more or less similarity to my own, one finds the following facts or theories to be of main import: Bruns[4] insists that the disease is expression of a congenital pathologic anlage. Thomson found records of eight cases in which some other members of the family than the patient suffered from some form of the same trouble. Adrian classifies the cases according to anatomic location of the tumors. He states that next to the peripheral nerves the spinal nerves are most frequently affected, with various symptoms corresponding to the parts compressed. Much less frequently the cranial nerves are involved, and even then the tumors are mostly seated on the extradural portion of their course. The pneumogastric is most often affected, but almost always outside the dura. Still rarer are the cases in which the tumors grow on the cranial nerves inside the cranium. The posterior fossa, and particularly the cerebello-pontile angle, is the elective localization. Enough cases have now been reported to show that few, if any, of the cranial nerves are exempt. Berggruen[5] had a case in an 11-year-old boy in which there were tumors on the cranial nerves on both sides, only the first, second, sixth and eleventh being spared. It was early stated by von Strube that the eighth nerve was never affected, but Adrian, writing in 1903, collected five cases in which the auditory nerve was the seat of a tumor growth, and since then there have been a number of other cases reported. Adrian found numerous instances in which there was psychic disturbance connected with the appearance of fibroma molluscum. The mental trouble was always of the nature of feeble-mindedness or great stupidity. In most cases the organic cause of this is not known, but in at least one instance a tumor of the frontal lobes was found.

Rarest of all are the half-dozen or so of cases, to which group belongs the case reported below, in which the tumors were both peripheral and intracranial. To be sure, some of the patients are known also to have had tumors on the spinal nerve roots and even in the medullary substance. Roux[6] argues from the literature, and from a patient of his own who had subcutaneous tumors and presented the earliest symptom in the form of Jacksonian epilepsy, that perhaps neurofibromatosis is always both central and peripheral, and that the evolution from benign to malignant growths determines the symptomatology. It seems certain from the study of many case reports that there is great variation in the evolution of symptoms, and that, as with our own patient, there may be considerable periods with stationary or recessive symptoms. Pathologic findings have led some authors, such as Hulst,[7] Cestan[8] and Berger,[9] to designate the disease, at least in its acute form, as neurofibrosarcomatosis. On the other hand, we have the reports of benign cases with even stationary intracranial symptoms, the most remarkable of which is the interesting case of Pastine,[10] in which the patient, with left facial, hypoglossal, vagal and glossopharyngeal paralysis, had reached the age of 67 when reported.

The symptoms of intracranial neurofibromatosis are, of course, those of tumor of the brain in general—headache, vertigo, vomiting, optic neuritis, impairment of vision—plus the findings significant of involvement of special cranial nerves; for instance, when the acusticus is affected the earliest symptoms are generally tinnitus and vertigo, followed by gradually increasing deafness. Two peculiarities of the evolution of this particular disease appear to be of great significance for diagnosis: First, there are quite often simultaneous or almost simultaneous signs of involvement of nerves on both sides which preclude interpretation of the findings as being caused by a single unilateral or even by a mesial growth; this was shown clearly in the case which I shall report, as well as in the reports of Berggruen,[5] Raymond,[11] Cestan,[8] Henneberg and Koch,[2] Raymond and Claude,[12] and Skoczynski.[13] Second, there are apt to be remissions of months' duration in the symptoms, as in our case and those of Henneberg and Koch and others. The reason for these prolonged betterments would seem rather hard to explain if the rapidly developing symptoms are always caused by true sarcomatous metamorphosis of the tumor. The possible celerity of the growth of the tumors is evidenced by Skoczynski's case, in which the subcutaneous tumors increased in number from forty to sixty while the patient was under observation. In our case the peripheral tumors undoubtedly grew to their present size in a year's time from a condition at least not readily noticeable. Death is frequently determined indirectly by involvement of the pneumogastric, which may lead to tachycardia, vomiting, difficulty with swallowing and consequent aspiration pneumonia.

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[1] Centralbl. f. d. Grenzgeb d. Med. u. Chir., 1903; Beitr. z. klin. Chir., 1901.

[2] Arch. f. Psychiat. xxxvi, 251.

[3] Archiv. Int. Med., February, 1909.

[4] Encyclop. Jahrb. d. ges. Heilk., 1905, xii, 318.

[5] Arch. f. Kinderh., 1896, p. 89.

[6] Rev. neurol., April 15, 1907.

[7] Arch. f. path. Anat., clxxvii, p. 317.

[8] Rev. neurol., 1903, p. 745; 1900, p. 161.

[9] Arch. gén. de med., 1904, p. 1367.

[10] Riforma med., 1906, pp. 1037, 1076; abstr. in Rev. neur., 1907, p. 61.

[11] Jour. de méd. inst., 1902, pp. 165, 199; Sem. méd., 1903, p. 278.

[12] Rev. neur., June 15, 1908.

[13] Neurol. Centralbl., 1905, p. 375.

From study of the literature we must certainly decide with Cestan that in many cases of neurofibromatosis the central nervous system is spared, in so far at least as localization of the symptoms is concerned. We know definitely that many tumors may exist on the spinal roots, in the cauda or even in the cord or brain without causing symptoms; we know that on account of the growth of the tumor from the interstitial elements that the nerve filaments need not be heavily compromised; indeed, intact axis cylinders have been observed passing through the tumors. So it seems that both centrally and peripherally disposed tumors might easily be overlooked clinically and not discovered without a complete autopsy. Thus we are brought back possibly to the standpoint of Roux, namely, that the disease is perhaps always both central and peripheral. However this may be, the combination, shown by the patient in the case which I report below, of intracranial with subcutaneous tumors, has been reported by only a few authors—Haushalter,[14] Pastine, Henneberg and Koch, Raymond and Claude, Skoczynski, Bartel.[15] After recognizing the very definite picture of the disease in this form one has no hesitation in subscribing to the dictum of Bruns,[4] who says that it is safe to assume that intracranial symptoms of compression are caused by neurofibroma if one finds such tumors in the periphery, especially if the symptoms point to the cerebello-pontile angle.

Therapy relating to this disease is a blank. I find no record of operation for the intracranial growth, nor on account of the usual multiplicity of the tumors is anything more than a palliative decompressive operation likely to be of service.

I saw the following case through the courtesy of Dr. A. E. Luckhardt. To him I am very grateful for much aid in painstaking examinations and in eliciting the history, which was obtained with difficulty.

Patient.—Miss X., aged 18, candy-maker who had not worked for about a year previous to examination. Family history and personal history previous to onset of present illness negative; no injuries, habits good.

History.—Four years ago the first symptoms of the present trouble began with ringing in the ears and progressive deafness. Both ears were early involved. Operations on the tonsils and nasopharynx gave no benefit and there was gradual onset of bilateral deafness. About three years ago the patient began to suffer from headaches in frontal and occipital regions, occasional vomiting, from vertigo and progressive difficulty in walking. Then diplopia appeared and some impairment of vision. There were never any fits or convulsions at any time. The symptoms remained stationary for some time. Then there was betterment and the patient resumed work. About one year before the time of examination she finally stopped work on account of trouble in walking, inability to see well enough for her occupation, and vertigo. About six months before the patient was seen, however, her suffering became much less acute. Vomiting became very infrequent, headaches much less severe and vision somewhat better. Afterward the condition was much the same until just before the patient was examined, except as to gait, which grew gradually worse. Very recently an entirely new symptom, difficulty in swallowing, appeared. The patient had been seen about eighteen months previously by Dr. David Fiske, who then discovered an optic neuritis of high grade; he does not believe that the subcutaneous tumors on the face were then present.

Examination.—Nutrition was good; color fair. Examination of abdomen and thorax was negative with the exception that the otherwise normal heart action was always rapid. About a dozen subcutaneous tumors were found on various parts of the body, asymmetrically disposed, three of them being on the face. They were well defined circular growths attached to the skin, non-inflammatory, easily depressed to or near the level of the skin, soft, and some of them distinctly tender when deeply pressed. There was a trace of pigmentation over some, but not clearly marked. The mental condition was apparently normal and the patient unusually bright, considering the trouble with seeing and hearing.

Cranial nerves: First: Smell normal subjectively and objectively. Second: Fingers seen at six feet with left eye, but this varied; sometimes this eye was blind while the patient was in the hospital. The patient read fairly well with the right eye, though vision at periphery of field was poor. The optic discs showed high grade neuritis; swelling about 4 diopters; appearance of mottled paleness in the center of exudate more marked in the left eye. Third and fourth: Negative: pupils equal, symmetrical and reacted to light and accommodation. No ptosis. Nystagmus only on lateral deviation. Fifth: Cornea on both sides markedly insensitive. Sensibility of skin over face normal. Good action of masseter muscles. Sixth: Abducens paralysis practically complete on left side, almost complete on right side. Seventh: Paresis of facial muscles on both sides, left more marked than right. Electrical examination showed no reaction of degeneration, but there was slight diminution to the response of the muscles of the right side. Eighth: Completely deaf on both sides to both air and bone conduction. Ninth: Palatal and pharyngeal insensitiveness, no pharyngeal reflex, nasal voice, palate lifted equally on both sides, but not to normal degree. The patient complained of occasional difficulty in swallowing and more occasional regurgitation of liquids through the nose when swallowing. Tenth: Tachycardia persistent, pulse regular but always over 90. When the patient left the hospital the pulse was about 120 while at rest. Eleventh and twelfth: Negative, tongue freely moved and with normal force.

Motor: Gross strength of arms and hands good on both sides. Fine movements of hands somewhat defective on both sides. Legs, strength slightly impaired. Slight spasticity in left leg.

Gait: Typical cerebellar. At repeated trials no evidence could be gained of falling or of walking persistently either to right or left.

Sphincters: Action normal, never any difficulty.

Coordination: Good in hands and arms; in legs, cerebellar type of incoordination both right and left. On taking position there was extreme swaying either with eyes open or shut. The patient stood and walked with feet far apart.

Tremor: Rather coarse, noticeable only in outstretched hands.

Sensation: Everywhere normal to temperature, touch, pain. Sense of position normal. Stereognostic sense perfect.

Reflexes: Arm-jerks lively, no carpo-metacarpal reflex, knee-jerks and Achilles jerks both much increased, left greater than right. No clonus. Babinski both sides, right greater than left; Oppenheim both sides; Gordon paradoxic sign left side; abdominal reflexes all absent.

The unusual features of this case seemed very hard to explain until Dr. H. G. Anthony made the diagnosis of the subcutaneous tumors and I had studied the literature of the subject. It then appeared clear, in the light of recorded cases, that our patient was suffering from multiple intracranial neurofibromata. During four weeks in the hospital, part of the time under antisyphilitic treatment, the patient showed no radical change except that the tachycardia gradually increased.

When this case was presented before the Chicago Neurological Society it was discussed among others by Dr. Carl Wagner, who said that the patient had later come under his care, that *x*-ray pictures demonstrated a growth in the region of the cerebellum, and that he operated and discovered a tumor. The patient quickly developed respiratory difficulties from which she did not rally. No autopsy was obtained. The case is, however, clear-cut enough to add to the few recorded cases of peripheral plus intracranial neurofibromatosis.

34 Washington Street.

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[14] Nouv. Icon de la Salpêtrière, 1900, p. 639.

[15] Zeitschr. f. Heilk., 1905, Abth. f. path. Anat., p. 281.

ATAXIC ARSENICAL NEURITIS WITH LOSS OF OSSEOUS SENSIBILITY

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CHARLOTTESVILLE, VA.

Considering the widespread occurrence of arsenic in nature, its frequent medicinal use, its occurrence in wall papers, fabrics, and occasionally alcoholic beverages, it is somewhat surprising that so few cases of arsenical poisoning, and particularly arsenical neuritis, have been reported in medical literature.

The remarkable Manchester epidemic reported by Dr. E. S. Reynolds[1] in 1900 is quite familiar to us all, and yet with its two or three thousand cases nothing absolutely pathognomic of arsenical neuritis could be established. It is true that, taken collectively, the symptoms varied sufficiently from those of the more common alcoholic form to arouse Dr. Reynolds' suspicions and lead to his brilliant piece of investigation. Dr. J. S. Bury,[2] writing about the same time, states that for the thirty years preceding this epidemic only seventy cases had been reported; consequently, most of our knowledge concerning this particular form of neuritis must be gathered from the study of the Manchester cases, and I shall review briefly the more salient features of this epidemic.

From the reports by Reynolds, Bury, Niven,[3] and from the editorial columns of the *British Medical Journal,* Dec. 1, 1900, and the succeeding four and five issues, the following more prominent symptoms may be enumerated: Running of eyes and nose, pigmentation of the skin, rashes on hands and feet, paralysis, analgesia, myalgia, paresthesia, diarrhea, ataxia of varying degrees, tachycardia, elevated temperature (102 to 103 F.), gastrointestinal disturbances and vasomotor changes. While most of these symptoms are common to other forms of neuritis, the combination of skin pigmentation with the vesicular or papular eruption, tachycardia, extreme ataxia, marked sensory changes, and persistent slight elevation of temperature with the usual symptoms of neuritis and a history of its toxic nature, should be strongly suggestive of an arsenical type.

Since the Manchester epidemic I have collected reports of 28 cases of arsenical neuritis from the literature; 2 following the ingestion of rough-on-rats (Sabin,[4] Hersman[5]), 1 from ingestion of arsenic with suicidal intent (Sedgwick[6]), and 25 following the administration of arsenic for medicinal purposes. Reports of 23 of the 25 cases following medicinal use were collected in the monograph of Thomas and Greenbaum,[7] in which 19 followed chorea and 4 were nonchoreic. Of the remaining 2 cases, 1 is reported by Sinkler,[8] who remarks on the infrequent occurrence of arsenical neuritis, and the other case is reported by Dr. Angell in discussing Sinkler's paper. Thus, leaving out the British epidemic, I have found reports of only 98 cases in the last thirty-eight years—Bury's 70 cases before the epidemic, and the 28 cases reports of which were collected by myself. But 18 of the cases reported by Thomas and Greenbaum were collected from the literature prior to the Manchester cases, and if we exclude these, since they may have been included in Bury's estimate, we find only 80 cases for the past thirty-eight years; at least this is the result of my study of the references and the journals at my command.

Accordingly, the following case has been of interest to me for three reasons: first, because of the infrequent occurrence of the condition; second, because of the difficulty in ascertaining the etiologic factor; and, lastly, because of its pseudo-tabetic features and the observation of a clinical sign common to tabes and neuritis which has hitherto been unreported in the latter condition, namely, the loss of osseous sensibility.

History.—E. G., male, aged 31, was admitted to the University of Virginia Hospital, in the service of Dr. J. S. Davis, Aug. 27, 1908. He was referred to me on September 3, at which time he complained of "nervousness in hands and feet, and inability to walk." The patient, with his wife, mother and father, had been living in a newly painted house, and all of them had recently suffered from gastric disturbances; the father now complained of tingling and numbness in the hands and feet. When a child, the patient had had whooping cough and diphtheria, but recovered from both without ill effects. He denied lues, but admitted a moderate indulgence in alcohol, having drunk about two dozen bottles of beer in the past month. His occupation was that of yard conductor in a railroad terminal.

Present Illness.—On July 16 (at which time the house was being painted) the patient was suddenly taken with nausea and vomiting while on his way to work. The vomitus was of dark green color and tasted bitter. The attack began about 5 p. m., and the patient continued to vomit, at intervals, until late in the evening, when there occurred severe griping pains in the upper abdomen and slight diarrhea. His condition became so alarming that a physician was called who gave him an "injection in the arm." The next morning he was slightly exhausted, but otherwise comfortable and able to attend the wants of his father and mother, who were confined to bed from a severe vomiting spell of the evening before. On the following day, July 18, after eating some cold meat, of which his mother also partook, both again had severe vomiting, which was more marked in the patient, in whom it lasted several hours and was accompanied by abdominal pain. He continued to suffer from gastrointestinal irritability until about July 22, when he began to improve steadily and could retain an ordinary diet. About ten days later (August 1) he noticed tingling and numbness in his hands and feet, and observed red blotches on the palms and soles, but nowhere else on the body. These symptoms were soon followed by weakness in the legs, tenderness in the calf muscles, and difficulty in performing finer movements with the hands. There was difficulty in walking unless the eyes were directed to the ground. He continued to grow worse, and finally, about two weeks later, his legs "gave way" and he fell in the street. The fall was not preceded by nausea, vomiting, or vertigo, and there was no loss of consciousness or incontinence of urine or feces. The other members of the family had entirely recovered, except the father, who, the patient said, still had tingling and numbness in the hands and feet.

General Examination.—The patient was a rather poorly nourished white man, six feet tall, weighing 140 pounds; his normal weight being 170 to 180 pounds. He lay comfortably in any normal position and there was no evidence of contractures. There was a slight double wrist-drop and marked drooping of both feet. He could not stand alone, and there was marked Romberg sign present. He could walk with assistance and there was extreme ataxia and decided "steppage gait

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[1] Reynolds, E. S.: Brit. Med. Jour., Nov. 24, 1900.

[2] Bury, J. S.: Remarks on the Diagnosis and Treatment of Arsenical Neuritis, Brit. Med. Jour., Dec. 8, 1900.

[3] Niven: Cases Illustrating the Nature of the Epidemic in Manchester, etc., Brit. Med. Jour., Dec. 15, 1900.

[4] Sabin, F. R.: A Case of Arsenical Neuritis, Johns Hopkins Hosp. Bull., July, 1901, xii.

[5] Hersman, C. C.: Discussion on paper by Wharton Sinkler, The Journal A. M. A., 1905, xliv, 602.

[6] Sedgwick, R. E.: A Case of Acute Arsenical Poisoning. Lancet, London, 1904, II.

[7] Thomas, H. M., and Greenbaum, H. S.: Multiple Neuritis (Non-diphtheritic) in Children, The Journal A. M. A., April 27, 1907, xlviii, 1397.

[8] Sinkler, Wharton: Some Uncommon Forms of Multiple Neuritis, The Journal A. M. A., 1905, xliv, 598.

Head The pupils were regular, of equal size and reacted to light and during accommodation; the eyes moved equally in all directions There was no ptosis, nystagmus or strabismus The forehead was wrinkled equally on the two sides, the nasolabial folds were of equal intensity, and the patient could whistle, show the teeth or smile in a normal manner The tongue was protruded promptly and in the median line The first eighth, and both portions of the fifth nerves were apparently normal The eye grounds were examined by Dr Compton, who reported 'Retina of both eyes slightly hyperemic and nasal margin of both discs slightly blurred Fields of both eyes good"

Trunk The chest expanded equally on the two sides Respiration was 20 to the minute The abdominal cutaneous reflexes were present and of normal intensity There was no disturbance of cutaneous sensibility The sphincters were normal

Upper Extremities All active movements could be performed, though somewhat diminished in strength, and the extensors were somewhat weaker than the flexors and less resistant to passive movements There was a slight double wrist drop and slight depression of the dorsal interosseous spaces The variation in measurements of the two arms was within normal limits The hands and forearms, in the lower one third, were anesthetic to touch but hyperesthetic to pain, which was particularly marked at the fingers The temperature sense was normal There was marked ataxia in both upper extremities The biceps and triceps tendon reflexes were present

Lower Extremities All active movements at the hips could be performed and resistance to passive movement was good The extensors of both legs were considerably weakened to both active and passive movements The calf muscles were extremely flabby, powerless and slightly atrophic in both legs, though *more marked on the* right side The anterior tibial and peroneal muscles were paralyzed in both legs, and the foot drop was marked There was anesthesia to touch in both feet and legs, extending up to about the middle of the thighs, where there was gradual transition into normal cutaneous area The same area was hypersensitive to pain The temperature sense was retarded, but hot and cold could be distinguished Over the external malleolus of the right leg there was a vesicle about the size of a twenty five cent piece, and just above this a vesiculo papular eruption There was some impairment of the postural sense confined to the toes Ataxia was marked in both legs The patellar and tendon of Achilles reflexes were absent on both sides The cremasteric reflex was exaggerated Babinski, Oppenheim and Gordon phenomena were absent, and there was no ankle or patellar clonus There was no marked difference in mensuration on the two sides Over both tibiæ there was a loss of osseous sensibility or vibratory sense, when tested with a middle C tuning fork The loss of this sensibility, however, did not extend over the entire subcutaneous surface of the tibiæ It was absolutely lost in *the upper* and lower thirds, but could be appreciated in the middle third in irregularly distributed spots when the vibrations were of wide amplitude Even in these areas the sense is greatly diminished

Electric Examination—The extensors of both forearms showed diminished irritability to the faradic *current, and* increased response to the galvanic current The extensors on the front of the thigh, anterior tibial and peroneal muscles, gastrocnemius, soleus, and flexor brevis digitorum of both extremities failed *to respond to* the strong faradic current Their reaction to the galvanic current was greatly diminished, the contraction was slow and lazy, and the anodal closure contraction was greater than the cathodal closure contraction

Blood Examination—Reds numbered 4,768,000, whites, 8 000, hemoglobin, 80 per cent A fresh smear and stained specimen showed nothing of any consequence Blood pressure was 140 mm Hg Nothing abnormal was found in the urine

Course of Disease—The patient remained in the hospital about two months, and during the entire time had an irregular temperature varying from 96 to 100 5, while the pulse varied from 70 to 140 per minute, but appeared to bear no relation to the changes in temperature, and most of the time was above 100 Sudden variations of the pulse, from 60 or 70 to 120 or 140 per minute were a most striking feature

Diagnosis—Here, then, we had a nervous affection of sudden onset with vomiting and epigastric pain, followed by lower segment paralysis and anesthesia of symmetrical distribution, loss of deep reflexes, Romberg sign present extreme ataxia, and loss of osseous sensibility in both tibiæ The differential diagnosis lay between tabes dorsalis and multiple neuritis, while the more remote possibilities were anterior poliomyelitis, acute ascending paralysis and beriberi

The gastric pain vomiting, sensory disturbances, loss of deep reflexes, presence of Romberg sign, marked ataxia and loss of osseous sensibility were very suggestive of tabes dorsalis But the absence of shooting pains, construction bands about trunk, Argyll Robertson pupil and bladder or rectal involvement, the absence of history of lues, and the presence of muscular degeneration served to exclude locomotor ataxia Accordingly, by a process of exclusion, a diagnosis of multiple neuritis was reached The next and most important duty was to determine the cause of the neuritis Three possibilities suggested themselves the ingestion of some toxic substance, auto intoxication, and idiopathic neuritis The toxic theory seemed most promising, and lead and arsenic were strongly suspected. The absence of a lead line on the gums, the wide distribution of the paralysis, and the facts that the patient and his family had in no way handled the paints, that all the painting was on the exterior, and that the blood examination was entirely negative, somewhat weakened my belief in lead as a causative factor Recalling the Manchester epidemic among beer drinkers, I at once sent to the patient's home for a sample of the beer he had been using, but learned that it had all been consumed, consequently my opinion was divided between ptomain poisoning, the ingestion of some metallic poison, and neuritis of unknown origin The usual treatment for neuritis was then begun and strychnin and arsenic administered internally On September 26 my patient's family sent a can of baking powder to the hospital A portion of its contents had been used on July 16, when the family was first made ill, but, by chance, it had not been used again until some time in September, when the gastrointestinal symptoms were again induced, and then suspicions were aroused I at once took the baking powder to Prof J W Mallet, of the University of Virginia, and asked him to examine for arsenic Much to our surprise, on the following day he reported arsenious acid present in 1 33 per cent The paper wrapper about the original package of powder was analyzed and found free from arsenic Other specimens of the powder obtained from various sources were analyzed and found free from arsenic Professor Mallet therefore believed that the arsenic was placed in the can with criminal intent Due credit should be given the manufacturers of the powder, who, on hearing of the case, immediately sent a representative to make investigations and have since employed detectives who are now making every effort to apprehend the criminal

When these facts came to light, arsenic was at once eliminated from the treatment, and the patient left the hospital one month later, much against our advice, but considerably improved

Seeing the harm, then, that may follow the treatment of disease when the diagnosis and etiology are not well established, I must regret my failure to analyze the urine, hair and nails in this case before treatment was begun Arsenic was found in all these substances during the Manchester epidemic, the analysis is simple and the detection of it in abnormal amounts would have at least prevented the administration of more arsenic.

J. Dixon Mann[9] found that the white matter of the nervous system contained larger amounts of arsenic than the gray, a fact which he explained by the greater affinity between the arsenic and neurokeratin network; and he thinks that the duration of arsenical neuritis depends not only on this combination of arsenic with the neurokeratin, but also on its subsequent liberation and dissemination. This might also explain the variable pulse and the marked changes in muscle reaction to the electric current observed in my case; that is, the arsenic may be liberated periodically or in variable amounts.

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[9] Mann, J D Brit Med Jour , Oct 12, 1901

The loss of "osseous sensibility" in this case is of interest because the same phenomenon is observed in tabes dorsalis, which is frequently simulated by the ataxia form of multiple neuritis, or pseudo-tabes of the French.

According to Goldscheider,[10] the "vibratory sense" was first demonstrated by Rumpf, who in 1889 tested individual acuteness in distinguishing the vibrations as separate sensations and as a continuous buzzing. Later, in 1895, Treitel made use of the tuning-fork in studying the duration of the vibratory sense. Both of these investigators found abnormal sensibility when this test was applied in cases of tabes dorsalis.

This method of examination, however, received little attention until 1899, when M. Egger[11] announced that by means of the vibrating tuning-fork he could determine the conductivity in bone, and hence called it "osseous sensibility." He studied the condition in tabes, syringomyelia, Brown-Séquard's paralysis, cerebral hemianesthesia and hysteria, and found that in each of these conditions the "osseous sensibility" was greatly diminished or entirely absent. Loss of this sensation was so constant in tabes and syringomyelia that the tuning-fork became helpful to him in clinical work. There seems to be so much uncertainty concerning this "vibratory sense" or "osseous sensibility" that I shall not attempt to discuss its nature or mode of propagation, but shall refer the reader to the more recent works of Goldscheider,[10] Marinesco,[12] Williamson,[13] and Minor.[14] None of these authors, however, has made any report on the "vibratory sense" in neuritis. Furthermore, in my review of 200 cases of neuritis from various causes, since the appearance of Egger's article, I have not found one in which the vibratory sense was tested. For this reason it appeared worth while for me to report the observation in this case, but I do not mean to say that the loss of this sensibility is indicative of the nature of the neuritis. Occurring, as it did, in the ataxic form of neuritis, this loss of "vibratory sense" illustrates a further resemblance of that disease to true tabes.

I wish to thank Dr. J. S. Davis for permission to report the case, and Prof. J. W. Mallet for his generosity in making the chemical analysis.

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10. Goldscheider: Ueber das Vibrationsgefühl, Berl. klin.
11. Egger, M.: La sensibilité osseuse, Jour. de physiol. et de path. gén., 1899, i.
12. Marinesco: Presse méd., Aug. 13, 1904.
13. Williamson, R. T.: The Vibrating Sensation in Affections of the Nervous System, Lancet, London, 1905, i.
14. Minor, L.: Jour. Nerv. and Ment. Dis., 1905, abstract.

Sensibilities of Idiots.—H. B. Sheffield, in the *Post-Graduate*, February, states that most idiots are insensible to touch, pain, heat or cold—anomalies of sensibilities which explain the frequency with which such children are subjected to external injuries and voluntary bodily mutilations. In some of them, however, especially in those with marked defective vision, tactile sense is so highly developed that by this means they are able to recognize the persons who feed and care for them.

THE ROENTGENOLOGIST AND HIS SPECIALTY *

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It is just thirteen years since the scientific world received from Professor Roentgen his classical "First Paper," a communication which caused it to turn its interested gaze toward the little city of Würzburg, interest giving place to astonishment as the second and subsequent papers appeared. Heretofore, man could gain knowledge of invisible things only by deduction from hearing and touch, but now—to see the unseen! Small wonder that this new material for research was seized by scientific workers the world over. Roentgen's discovery was taken up with eagerness by all nations active in educational matters, and experimentation was promptly begun. Certain propositions were not accepted absolutely, argumentative attitudes were assumed, opposing theories brought forward. It must be conceded, however, that a great proportion of Roentgen's observations and assertions are to be regarded as axiomatical and remain incontrovertible after the passage of thirteen years.

By guiding the mind and hand of the discoverer, in that some of his earliest observations were made on portions of the living skeleton, Destiny seemed to decree that this new physical agent was to be a gift from Science to Medicine — that it was to become, in practical application, a profound factor in the relief of human ills and suffering.

So it has been, but with what sacrifices! Human sacrifices, on the altar of Learrning. Many of these offerings were chosen by Science from her ranks, but Medicine, receiving the gift in the spirit of the giver, contributed as generously from among the worshipers in her own temple. Formidable, indeed, is the list of those who have laid down their lives in an honorable cause, and he who can appreciate the glory achieved by these martyrs, storming the citadel of Knowledge in the face of a subtle and unrecognized danger, can never forget the names of Dally, Weigel, Fleischman, Radiquet, Blacker, Fuchs and Wagner.

Although Medicine welcomed the gift of this new agent as a possible addition to her diagnostic and therapeutic munitions, she regarded it as a powerful but clumsy weapon, its possibilities quite uninvestigated; useful, indeed, but not delicate enough for expert hands. The throat mirror needed the practiced eye, the stethoscope an acute ear, and the scalpel trained fingers, but this new affair, these *x*-rays, their very name a confession of inexactitude, could be managed by any hospital photographer, ward orderly or nurse. The one thing needful, only, was a hand to start the machine and then—to stop it. A process purely mechanical; no brains necessary. I heard it said, about ten years ago, that any high-school boy, given a smattering knowledge of human anatomy, should be able to "take *x*-ray pictures," to borrow the expression used. History seems to show, by the character of results at this time recorded, that the mental dimensions of these jacks-of-all-trades must have fitted the requirements to a nicety, indeed.

Clumsy apparatus and tiresome details made private office practice with the new rays undesirable, and patients were often sent for a diagnosis to the larger hospitals or to the laboratories of the technical schools. In many instances these imperfect conveniences were unavailable, and in isolated communities Dr. Thomas, Dr. Richard and Dr. Henry struggled manfully to determine the position of fracture fragments with complete disregard of certain fundamental laws of optics, or, in blissful ignorance of the phenomena of a Roentgen dermatitis, continued to produce sloughs where often a simple dermic lesion formerly existed. It is not surprising that the patient regarded the cure as worse than the disease; and as a consequence, not to speak of the additional effect of frequent fantastic diagnoses, the Roentgen rays received a series of blows in the eye, of which the ecchymosis has not yet disappeared.

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* Address before a joint meeting of the New York Academy of Medicine and the American Roentgen Ray Society, New York, Dec. 29, 1908.

What was the reason for this state of things? It is not hard to find. The practice of using the Roentgen rays for the purposes of medicine was not placed on a stable basis. It was a piebald proceeding, a sort of Joseph's coat of many colors, which fitted no one. The attendant wires and sparks suggested an electrician's work, surely; true, but there were the plates, darkroom and chemicals, considered usually the accessories of the photographer. Neither of these artisans, on the other hand, could be expected to intrude themselves so far into the realms of medicine as to offer a diagnostic verdict.

Nothing but chaos came or could come from such a situation. Since a right pursuance of the work seemed to demand the conjoined efforts of at least three experts of distinctly dissimilar training, no one of them could do the work of all. The electrician, after dallying in the darkroom with the chemicals, produced photographic results of no higher quality than might be expected of an electrician; the photographer, after producing a generous display of pyrotechnics in the immediate vicinity of the patient, finally met with a practical electrical problem quite beyond his depth; while the surgeon, albeit well versed in all heretofore employed methods of diagnosis, skillfully cut for renal stone in an endeavor to find what was, in reality, the elusive suspender button.

Thus it became only too apparent that there was needed, in this field of usefulness, an individual who should save the situation; who should redeem from its uncertain status the practical application of a physical phenomenon of the greatest practical possibilities. This individual must not have simply bowing acquaintance with a broad education, but he must have a cheek-by-jowl intimacy with specific knowledge which only especial schooling creates. He must not possess mere "medical training," a term with an elastic application, but he must have acquired the doctor's degree, and, in addition, must have gained the technical skill required to make his medical opinions valuable.

When, therefore, there appeared at this juncture the one so long needed, an individual who foresaw the importance of roentgenology as a medical specialty, and was prepared to declare himself a devotee thereof, his arrival was as opportune as Sheridan's at Winchester. He entered the field by various roads, and his respect for his chosen work was such that, in instances where he was qualified as a physicist alone, he cheerfully retired, to re-enter by the steep and rugged path of Medicine. Known in those days, in an offhand way, as "an x-ray man," it became his duty to assume alike the part of the electrician and the photographer, and often, one regrets to say, that of the ward orderly, if not of the nurse. The implements with which they had struggled to till the new soil descended to him as a heritage, together with all the odium attached to the earlier practical work, which had proved a disappointment instead of a blessing. A discouraging task, indeed, but he went at it with good spirit. As a result of his efforts, *first*, certain technical features of the work have been exalted from the mere connecting of wires and rule-of-thumb manipulation to an involved study of electrostatics and the management of electrical discharges *in vacuo*. Second, by demonstrating that roentgenology, the science, and photography, as a calling or a trade, have nothing in common, he has established the fact that his diagnostic plates are merely a means to fortify his opinion as a diagnostician, and are not to be "struck off" at so much the dozen. Third, as a medical practitioner, the divers procedures connected with his work have brought him in contact with nearly every branch of medicine and surgery. What, indeed, could be more broadening in its influence?

It is but fair, at this point, to mention three additional impediments, of somewhat extraneous origin, which, for a time at least, hindered the early development of the roentgenologist as a medical specialist. Possibly the greatest of these was the adoption of the Roentgen rays by the charlatan for his irregular purposes. This type of individual was quick to see the impression which might be produced in the lay mind by a demonstration, chiefly of fireworks, which could be masqueraded beneath the protecting cloak of the Roentgen rays. According to expectation, the public was duly impressed, and perhaps an exact science might have been paraded even longer under false colors, had not the discovery of radium and various other agents which easily could be veiled in mystery diverted the attention of the unscrupulous pseudopractitioner.

The second deterrent factor, and none the less detrimental, was the attitude of the zealous manufacturer who experimented at the expense of his customer and whose sole interest was his own financial aggrandizement. What roentgenologist but who, in his early efforts to uplift his professional usefulness, has not, at some time or other, been made the dupe of conscienceless roguery by means of cheap-john apparatus, made to sell but never to use? The medical profession is noted, it is said, for its unsuspecting credulity. This is doubtless due to the fact that it judges others by the same standard of ethical conduct it requires of itself, and in respect to which it is often tried in the balance and seldom found wanting. The roentgenologist of the earlier days attained a degree of gullibility never reached by his professional brethren, and this was duly taken advantage of in the manner above mentioned.

It is not my purpose to deplore these unhappy situations as the existing order of things, but rather merely to mention them as a suggestion of what the earnest worker in this new science has had to contend with. Fortunately, much of it is now history.

Through the efforts of the roentgenologist the required results from the employment of the x-rays in diagnosis and treatment were becoming too scientifically exact for the peace and comfort of the charlatan. These efforts naturally resulted in a complete vindication of Abraham Lincoln's statement as to the impossibility of the permanent illusionment of the entire population. Since then roentgenology has had little to suffer from misrepresentations of the quack. By the very character of the work, born of perseverance, he has been routed; the consulting practitioner, weighted down with the responsibility of his patient's welfare, has learned to demand the type of diagnostic and therapeutic result which only true work can produce, and no longer is content to accept, with gaping credulity, a fluoroscopic diagnosis of appendicitis!

By an evolutionary process engendered by his own short sight, the objectionable manufacturer is being gradually but surely eliminated. We have in our own ranks men whose primary training has been of a nature purely physical. They have fashioned tools for us which we can use confidently and therefore effectively. These men protect us from the wiles of those with fewer scruples, and we can work in peace.

The third inimical influence against the proper development of roentgenology was by far the most serious one, and its effects are felt even to-day, unfortunately. It originated in the deplorably promiscuous use of the Roentgen rays as a therapeutic agent. When one recalls the history of the "Elixir of Life" and the "Philosopher's Stone" he can not much wonder at temporary over-enthusiasm concerning any new discovery.

The days of the alchemists having passed, however, the persistence of the belief that the Roentgen rays were almost a cure-all may well cause surprise. Few bodily ills were to be denied its healing influence, as may be judged from the fact that, as recently as 1906, it was publicly declared that the *x*-rays should be considered as a therapeutic measure in the cure of an acute appendix!

The manner of applying the *x*-rays, even under proper circumstances, was wholly haphazard, although their profound degenerative effect on the skin was becoming only too well known. In the general enthusiastic excitement, cases were reported in the most glowing terms, without the least allowance for the lapse of time—the one true test.

History shows that the serious-minded Roentgen worker, far from indulging in this early general hysteria, counseled a more temperate view of the matter and foresaw the reaction which was bound to ensue, and from which he has undeservedly suffered. Such a reaction has been as desirable as it was inevitable, for it has helped to clear the air, and so has been welcomed by the one who prognosticated its occurrence. In the same spirit he has willingly remained to bear the brunt of this reaction, while the howling fanatic, whose extravagant claims gave it birth, like Longfellow's Arabs in the night, has folded his tent and silently stolen away.

Such a revulsion of feeling has been far-reaching. It is not surprising that it should give rise to an impression among the medical profession, false, as I believe, that the Roentgen worker in the diagnostic field essays to create about his diagnosis the atmosphere of absolute finality. This is not so. Although many pathologic situations make themselves readily visible by this method of diagnosis, we can describe them only as they are apparent to us, and appearance may be a far cry from reality, surely. The medical practitioner well knows, however, to his everlasting benefit that a multitude of roentgenologic appearances have come to possess a definite meaning, based on the best pathologic proof. These "appearances," so called for want of a better name, are becoming as constant in value as the stethoscopic sound or the microscopic field. The true roentgenologist never stoops to consider the diagnostic agent which he commands other than a mere factor, but one out of many which help to clarify the diagnostic situation.

Since this is so, the specialist in roentgenology can ask no more than to be met by the general medical profession in the same spirit of fairness it would accord to any other worker in a specific field. All human endeavor or services are either good or poor. Good work is cheap at any price; poor work, even if gratuitous, is of the utmost costliness. Good work reflects the influence of the brain, ably aided by the hand; poor work reflects the efforts of the hand deserted by the brain. Remember these facts when you seek the fruits of true roentgenology elsewhere than at the tree. A diagnostic plate made at a commercial warehouse, or in a drug shop, is, in value, as the glass it is made on.

In his desire thus to maintain roentgenology on the high plane of scientific exactitude to which he has raised it, the American Roentgen worker of to-day looks to you, his professional brethren, for support of such a degree of integrity that it will radiate its benign influence to every city and community. He begs that this support will be offered in a temper of conservatism, remembering the while that his watchword is, also, "conservatism." To engender this spirit, and also the better to serve your interests as well as his, you have but to follow the advice of Pope:

> "Be not the first by whom the new is tried,
> Nor yet the last to lay the old aside."

155 Newbury Street.

FIBROMYOMA OF THE UTERUS COMPLICATED BY CANCER OR SARCOMA

WITH REPORT OF THIRTY-FIVE CASES

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The careful study of fibroid tumors of the uterus in the last few years has shown that these tumors are not the benign innocuous growths they were once believed to be. Each succeeding series studied shows more clearly that the dangers of these growths are not only from the symptoms produced by the tumors themselves, such as hemorrhage, etc., but also from the complications and degenerations incident to their continued presence in the uterus.

The most important change or complication which may occur in these fibroid growths is their association with malignant changes either in the tumor itself or in its host, the uterus. This malignant change or association has a very direct bearing on the treatment of these tumors in that, if it can be proved that there is a large percentage of malignancy in the growths or dependent on their presence in the uterus, a weighty argument has been made in favor of early operation and removal.

This malignant complication may occur in two ways, either as a direct degeneration in the tumor itself, as in sarcomatous degeneration, or as an association of cancerous or sarcomatous disease in a uterus already the host of a fibroid tumor.

It is difficult in some cases to decide whether a fibroid tumor has previously existed in a uterus which is now the seat of extensive malignant disease, for the destructive malignant lesion may have caused a disappearance of the fibroid growth or the growth itself may have created tumor formation to simulate the necrotic remains of a fibroid. This is particularly true of sarcomatous disease, and the small percentage (1 per cent.) of sarcomatous degeneration in this series compared with others is held to be due to the fact that no tumor was included in this series unless it was distinctly shown that there was a true sarcomatous degeneration.

The association of malignant change with fibromyomata has had renewed study since my paper[1] in 1904, where, in a series of 280 cases of fibromyomata, it was shown that there was a considerable percentage of malignant changes; three cases of sarcomatous degeneration were reported, with one case of chorioepithelioma. These four cases are included in the present series of thirty-five cases of fibroid tumors complicated by malignant disease, cancer, sarcoma or chorioepithelioma malignum. These cases have been placed in three tables. Table 1 shows the percentage of occurrence of cancer in fibroid disease in a series of 700 routine cases; Table 2 contains the complications of sarcoma and chorioepithelioma and their relation to 700 fibroid tumors, while Table 3 is a summary of the previous two and gives the total percentage of occurrence of malignancy in the 700 tumors. These 700 cases[2] include the series of 280 studied in my previous paper of 1904.

It is also of importance as bearing on the treatment of these growths to know not only the percentage of occurrence of malignant change, but the age at which such change is likely to take place. For this reason the age of the patient at the time of operation has been included in the tables and the percentage of occurrence of each form of malignancy at each decade is shown.

TABLE 1.—CANCER ASSOCIATED WITH FIBROIDS

Age.	Total Fibroids.	Adenocarcinoma of Fundus. No.	%	Squamous Carcinoma of Cervix. No.	%
20-30................	19	0	0		
30-40................	233	0	0	1	0.4
40-50................	332	12	3.6	1	0.3
50-60................	95	6	6.3	3	3
60-70................	21	2	9.5	1	4.6
	700	20	2.9	6	0.8

TABLE 2.—SARCOMA AND CHORIOEPITHELIOMA ASSOCIATED WITH FIBROIDS

Age.	Total Fibroids.	Sarcoma. No.	%	Chorioepithelioma. No.	%
20-30..........	19	0			0
30-40..........	233	0			0
40-50..........	332	2	0.6	2	0.6
50-60..........	95	3	3		
60-70..........	21	2	9.5		0
	700	7	1	2	0.3

TABLE 3.—TOTAL MALIGNANT COMPLICATIONS

Age.	Total Fibroids.	Malignancy. No.	%
20-30..........................	19		
30 40..........................	233	1	0.4
40-50..........................	332	17	5
50-60..........................	95	12	12.7
60-70..................	21	5	23.8
	700	35	5

CANCER AND FIBROID TUMORS

While the frequent association of cancer with fibroid tumors has been recognized for many years, it is only since more exact methods of examination have been introduced that adenocarcinoma of the fundus was found to be a much more frequent association than was squamous carcinoma of the cervix.

It was noted in my paper of 1904 that "it seems at least that, while the association of squamous carcinoma with fibroids is accidental, the occurrence of adenocarcinoma may be more or less influenced by the presence of fibroid tumors." This statement has been borne out by many investigators, notably Piquand,[3] who has collected 179 cases of this association and has reported three cases of his own. Isolated cases, however, have little value or bearing on the treatment, for it must be proved that the liability to cancer is of sufficient importance to constitute an indication for the routine removal of these growths, and to do this not only must the total number of cases be noted but the varying percentage of the forms of cancer and the age at which they occur.

Noble[4] has collected from the various reports 4,880 cases of fibroid tumors, which showed cancer of the cervix as a complication in 63 cases and cancer of the body of the uterus in 75 cases.

From the foregoing collection it may be seen that, while the age is not noted, adenocarcinoma occurs as a complication of fibroids in 1.5 per cent. and squamous carcinoma in 1.3 per cent. In the cases reported in this paper adenocarcinoma occurred in 2.9 per cent. and squamous carcinoma in 0.8 per cent.; in other words, there were three times as many cases of adenocarcinoma as there were of squamous carcinoma.

This proportion is entirely the reverse of the usual proportional occurrence, as is shown by Piquand's collection of 1,135 cases of uterine cancer, in which he found 100 cases of squamous carcinoma to 17 cases of adenocarcinoma: and also from the records of the Johns Hopkins Hospital,* where there were found 412 cases of squamous carcinoma and 78 cases of adenocarcinoma, a proportion of 100 to 18.

It is obvious, therefore, that adenocarcinoma is relatively more frequent in association with fibroid tumors than is squamous carcinoma. This relationship may result from a common etiologic factor, or the fibroids may predispose toward the occurrence of adenocarcinoma of the fundus.

The fact that myoma of the uterus, as is well known, predisposes toward sterility, and that squamous carcinoma is found but seldom in women who have never had children, may have something to do with the apparent frequency of adenocarcinoma: in other words, women who have fibroids have no children and so are not likely to have squamous carcinoma of the cervix.

Although this may seem apparent, the argument on investigation develops several flaws. First of all, the percentage of sterility has been estimated by gynecologists on operative cases, as is shown by the proportion of sterility given by Mann,[5] 64 per cent.; Frederick,[6] 52.8 per cent.; Giles,[7] 60 per cent., and Cullen,[8] 52 per cent. It is obvious that if the percentage of 14.8 of occurrence of fibroids is correct, as shown by my autopsies reported in 1904, so that one woman in seven has a fibroid tumor, many women who never see a gynecologist have fibroids. Hence a gynecologist's percentage of sterility is not exact, but the actual percentage of sterility is probably lower.

It may be that the common etiologic factor is in the uterus itself and that there is some quality in the organ which makes it liable to become the seat of fibroid and malignant disease. This, however, is at present impossible of proof.

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[1] McDonald, Ellice: Complications and Degenerations of Uterine Fibromyomata, THE JOURNAL, 1904, May 21, xlii, 1344.

[2] These cases are from the records of the Bender laboratory, and I am indebted to Dr. Wolbach, the director, for access to the later ones.

[3] Piquand: Ann. de gyn., July and August, 1905, new series, ii.

[4] Noble, Charles P.: Fibroid Tumors of the Uterus, THE JOURNAL A. M. A., 1906, xlvii, 1881, 1998, 2065.

* Sampson, John A.: Importance of an Early Diagnosis in Cancer of the Uterus, THE JOURNAL A. M. A., 1905, xliv, 1586.

[5] Mann: Am. Jour Obst., June, 1907.

[6] Frederick: Am. Gynec., 1902, i.

[7] Giles: Lancet, London, March 2, 1907.

[8] Cullen: Cancer of the Uterus, 1900.

While a common etiologic factor may explain in part the association of adenocarcinoma and fibroid tumors, it is probable that the fibroid has some part in the frequency of this association. It has been suggested that the irritation of the fibroid tumor may cause congestion of the mucous membrane, alteration in the blood supply, and hyperplasia of the endometrium. Against this theory, however, it may be said that fibroids, unless they are sloughing, cause as a rule very little visible alteration in the mucous membrane, and it is held that there is usually a preliminary hyperplasia of the endometrium before adenocarcinoma occurs.

Mechanical disturbance of the circulation may be a factor. Of 20 cases here reported, calcification was present in 6 of the fibroids and necrosis in 4 cases. In 15 of the cases the fibroids were multiple and in 5 single. As may be seen from the table, no case of adenocarcinoma occurred in a patient under 40 years of age, and the percentage of occurrence increased with each decade.

In squamous carcinoma there was but one of the six cases in a patient less than 40 years of age, and the percentage of occurrence increased with each decade.

While fibroids may bear a causal relation to or have a common cause with adenocarcinoma, the association of squamous carcinoma is accidental. And, while the etiologic relation of the combination of adenocarcinoma with fibroids is obscure, the fact of the large percentage of this complication remains to be taken into account in regard to the treatment of these growths.

SARCOMATOUS DEGENERATION

There were seven cases of sarcomatous degeneration among 700 fibroid tumors. During the time the seven cases of malignant degeneration were observed there were twelve other cases of sarcoma of the uterus.

The tendency of pathologists in the past has been to doubt the possibility of a sarcoma arising from a myoma of the uterus, but most now admit its possibility. So good an observer as Mallory[9] states that he has studied a tumor, which without doubt was a malignant leiomyoma, and in which "the tumor cells tend to differentiate into perfect muscle cells." Such a possibility has long been recognized by gynecologists.

Tracy's[10] collection of 3,561 cases of fibroids gives 54 cases (1.5 per cent.) of sarcomatous degeneration. This form of malignancy is the one most frequently overlooked, as is shown by Winter's[11] two series. In the first of 500 cases only the suspicious points were examined microscopically, and sarcomatous degeneration was found in 3.2 per cent. In the second series of 253 cases in which sections were taken systematically sarcoma was found in 4.3 per cent. Winter believes that if myomata were examined systematically sarcoma would be found in about 4 per cent. of all cases. But this view is not borne out by this series, in which microscopic examination was made of all tumors.

The frequency of this degeneration will be seen from Table 2 to increase with each decade, being 0.6 per cent. in the fourth, 3 per cent. in the fifth and 9.5 per cent. in the sixth. No instance of this degeneration occurred before 40 years of age.

CHORIOEPITHELIOMA MALIGNUM

There were two instances of this complication, both of which occurred in the fourth decade. Both occurred after abortion, and one infiltrated the substance of the fibroid tumor, as was reported in my paper of 1904.

These two cases are supposed to be the only two instances reported of this association of chorioepithelioma malignum and fibroid tumor. Noble[12] reported one case, which, however, was afterward held by his pathologist, Babcock, to be a chorioepithelioma alone. The latter states: "In the early description of the growth it was described as a sarcomatous or endotheliomatous degeneration of a fibroid tumor, but restaining gives no evidence that fibromuscular tissue is present more than would accompany the growth of the syncytial tumor. It is believed that this is a *primary syncytioma malignum in a uterus not the seat of any other tumor.*"

The complication is a rare one and is mostly of interest because of its rarity.

TOTAL MALIGNANT COMPLICATIONS

The total number and percentage of malignant complications of 700 fibroid tumors, then, were 35 cases (5 per cent.), including 20 of adenocarcinoma, 6 of squamous carcinoma, 7 of sarcoma and 2 of chorioepithelioma malignum. Of these 35 cases, 27 cases (those of adenocarcinoma and sarcoma) were due to or influenced by the presence of the fibroid tumor, while 8 cases (those of squamous carcinoma and chorioepithelioma malignum) were of accidental association, that is, their occurrence was not influenced by the presence of fibroid tumor.

There was but one case of malignant complication, a squamous carcinoma, in a patient below 40 years of age; with each decade after 40 the percentage of malignancy increased markedly, being 5 per cent. in the fifth, 12.7 per cent. in the sixth, and 23.8 per cent. in the seventh.

In view of this large percentage of occurrence of fatal disease among patients having fibroid tumors, and the great increase of malignant complications after 40 years of age, it seems wise that a physician should advise all patients who have fibroid tumors and are over 40 years of age, to have these growths removed; for, if the fibroid is not removed, the probabilities are that malignant change will result in one case in every twenty between the ages of 40 and 50, one case in every eight between the ages of 50 and 60 and one case in every four between the ages of 60 and 70.

While it may not be necessary to remove every fibroid tumor in every case, it seems that in view of the malignant complications alone, putting aside the many other evil effects of these growths, it is dangerous to treat these tumors conservatively in patients more than 40 years of age.

Those adhering to the classical teaching assert that the tumors should be kept under observation until symptoms of malignancy or other dangers arise.

This is contrary to the surgical teaching of the age, which is essentially one of prevention of grave dangers by exposure to the lesser danger of operative cure.

Were there distinctive symptoms by which the advent of malignancy in cases of fibroid tumors could be recognized, the dangers of conservative and expectant treatment might be less; but who can say when a fibroid has become sarcomatous or how long a cancer will be confined to the uterus? Sarcoma often occurs without increase in growth of a fibroid and adenocarcinoma may cause but little additional discharge or hemorrhage in a case of fibroids which has excessive menstruation or bleeding.

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[9] Mallory: Buck's Reference Handbook of the Medical Sciences (Sarcoma).

[10] Tracy, S. E.: Fibromyomata, Degenerations, Complications and Associated Conditions, Surg., Gynec. and Obst., 1908, vi, 246.

[11] Winter: Zeitschr. f. Geb. u. Gynäk., 1906, vol. vii, 1.

[12] Am. Jour. Obst., 1898, xlvi, 3.

Those advising against operation in fibroid tumors in women over 40 years should remember that fibroid tumors are always dangerous, and that the older the patient is the more dangers these growths have. The menopause, instead of bringing a cure to fibroids, is but the precursor of more dangerous complications. The smouldering fire should not be watched until the house is in flames.

135 Central Park West.

GASTROINTESTINAL DISTURBANCES DUE TO ARTERIOSCLEROSIS *

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Gastrointestinal disturbances due to arteriosclerosis are sometimes found in patients who have a generalized arteriosclerosis or in those in whom the splanchnic arteries only appear to be diseased. The cases that come within the latter group are perhaps the more important from the diagnostic standpoint, as the true cause of the symptoms may be overlooked. Within the past few months I have treated ten patients with arteriosclerosis in whom the symptoms were mostly gastrointestinal.

The patients are usually over 40 years of age; individuals between 40 and 50 years old may have symptoms of a generalized arterial disease, while some patients who are much older may complain only of symptoms of a localized vascular disease. Of course generalized arteriosclerosis is more common in elderly people.

Abdominal pain is a prominent symptom. At first it is paroxysmal, lasting from a few minutes to half an hour and recurring several times a day; later it becomes continuous and the patient complains of a dull ache, soreness and throbbing in the abdomen. The pain is localized in the epigastric or umbilical regions, less commonly in the lower abdomen. It is increased by exertion and in some instances during digestion. Buch says that the attack may also be traced to emotional disturbances, or to assumption of horizontal position. One of the patients whose history (Case 3) I shall report had pain in the lower abdomen coming on about two hours after eating, lasting about two hours and then disappearing. Treatment directed against the vascular disease gave prompt relief.

Next to pain the most common symptom is weakness, and not a few patients lose weight. The loss of weight may be moderate and gradual or rapid and considerable. A loss of weight is very common in patients with arteriosclerosis, but the loss of weight is even greater in those who have an associated dyspepsia. The reduction in weight is due in part to the vascular disease and in part to the dieting which is undertaken in an effort to relieve the dyspeptic symptoms.

Abdominal distention and belching are frequently present. Therefore the association of dyspeptic symptoms with weakness and loss of weight in persons of middle or advanced age is apt to arouse some apprehension. As a matter of fact, malignant disease of the stomach had been suspected in four of the cases referred to below before they came under my observation. There may be fulness and distress after eating, nausea at times, and regurgitation of sour liquid is an occasional symptom. The appetite may be normal, increased, or diminished, or in some cases lost. The bowels are variable; there may be constipation, or constipation alternating with attacks of diarrhea, or the movements may occur at normal intervals.

Some patients suffer from attacks of vertigo, and a few complain of disturbance of vision. The urine is frequently diminished in quantity and may show signs of an interstitial nephritis. Many such patients show symptoms of autointoxication at times.

The radial arteries may or may not show the presence of sclerosis, and the blood pressure may be high, low or normal. It is important to determine the blood pressure. If one does not possess an apparatus for this purpose, fairly satisfactory results may be obtained, after a little practice, by applying one's fingers to the radial artery and noting the amount of pressure necessary to arrest the pulse wave. Of course the impression gained in this way is not to be compared in accuracy with the result obtained by the use of a blood-pressure apparatus.

While a diagnosis of arteriosclerosis can be made in most such cases without an analysis of the gastric contents, it is safer and more satisfactory to carry out such an analysis, for one is thereby better able to eliminate the probability of the presence of malignant disease of the stomach. Free hydrochloric acid is not infrequently absent from the stomach contents in normal persons over 50 years of age; therefore one need not be surprised at its absence in cases of arteriosclerosis such as those under consideration. Digestion is usually fair, and depends partly on the character of the gastric juice. The motility of the stomach is usually normal; in some cases it is increased, but lactic acid and Oppler-Boas bacilli are not found in uncomplicated cases of arteriosclerosis. Buch and others state that the abdominal pain is not influenced by the character of the food, and is felt only when large meals are taken. The character of the food does alter the symptoms, as good digestion is not to be expected in the absence of free hydrochloric acid from the stomach, and the secretion is not only altered in its chemistry, but in some cases the secretion of gastric juice is considerably reduced. Then, again, indiscretions in diet not infrequently produce a renewal of the autointoxication, a subacute aortitis or arteritis with diminished urinary secretion, vomiting, etc. In such cases of abdominal arteriosclerosis there is usually a pulsation in the epigastrium and the abdominal aorta is tender and painful. Some patients may have attacks of angina pectoris and the pain may also be referred to the epigastrium.

The following cases present some features which are of interest:

Case 1.—*Patient.*—L. B., female, white, aged 68, married, born in the United States, housewife, had been a hard-working woman and the mother of a large family, four sons being physicians. The patient was brought to me by Dr. George E. Bair, of Braddock, Pa., on March 28, 1908. Family history was negative.

History.—The patient had had the diseases of childhood and typhoid fever four years before examination. Her chief complaint was weakness, abdominal distention after food, heartburn, poor appetite, fulness and distress after eating; nausea, regurgitation of sour liquid after food or drink, constipation and vertigo. She had lost considerably in weight during the past six months and complained of some soreness in the abdomen, headache and pain in the back of head. She had been in bed most of the time for twelve weeks before I saw her, and was on a diet of broth and malted milk, as she could not retain anything else and very little of that. The patient was so weak that on her arrival in Philadelphia she was taken from her berth in the Pullman car to the residence of a relative and again placed in bed, where I saw her the following day.

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* Read before a meeting of the Philadelphia County Medical Society, Dec. 23, 1908.

Physical Examination.—The patient was a medium-sized woman, with a good color. There was evidence of wasting but no emaciation or cachexia. The teeth were very defective; lungs and heart negative, except that the aortic second sound was increased. The abdominal wall was very much relaxed, with a prominence in the umbilical region suggesting the presence of gastroptosis. The liver was normal in size and position. Gastric tympany began at the sixth rib in the left nipple line and the greater curvature of the stomach passed downward and to the right, crossing the abdomen three inches below the umbilicus. The lesser curvature of the stomach was midway between the xiphoid cartilage and the umbilicus. The position of the stomach was confirmed by inflation with the stomach-tube. There was a great deal of tenderness of the abdominal aorta, which could be moved by the palpating fingers. Palpation of the abdominal aorta caused her distress and a sense of nausea and faintness. There was no tenderness in the regions of the gall bladder or appendix. Peristaltic sounds could be heard over the displaced pylorus, occurring at intervals of from twenty to twenty-two seconds. The sigmoid flexure of the colon was palpable and probably contained feces. The radial and superficial temporal arteries were hard and easily palpated. The urine was negative but reduced in quantity.

Analysis of Gastric Contents.—An Ewald test breakfast was given and forty-five minutes later 100 c.c. of gastric contents were aspirated. Digestion was fair; some mucus was present. Total acidity was 35; free hydrochloric acid, a trace; reaction to Congo positive. The test for occult blood was negative, and no Oppler-Boas bacilli were found.

Diagnosis.—Arteriosclerosis, acute aortitis of the abdominal aorta, gastroptosis, gastric subacidity and constipation.

Treatment.—A zinc oxid plaster abdominal belt was applied for the gastroptosis. The patient was put on a suitable light diet of a mixed character; the constipation was relieved by enemata. She was also given tincture of strophanthus 10 drops three times a day and theobromin sodium salicylate 5 grains three times a day. She improved rapidly in flesh and strength, getting out of bed in three days, and two days later she walked seven blocks in the open air. She continued to improve; notwithstanding her age, she was very active and was able in a few weeks to walk great distances with other members of her family. A letter received from Dr. Bair on Nov. 5, 1908, states that the patient continues in good health. That gastroptosis was not the cause of the symptoms in this case was shown by the fact that rest in bed, which is very good treatment for this condition, failed to give relief, and that improvement took place only after treatment of the vascular disease.

Case 2.—*Patient.*—W. S., male, white, married, aged 68, born in the United States, principal of a school, was referred to me by Dr. Thomas S. Shriner, of Philadelphia, on May 19, 1908. His mother and one sister died of tuberculosis, the former aged 60, the latter 33. The patient had had the diseases of childhood and typhoid fever thirty-one years ago.

Present Condition.—The patient complained of loss of weight and strength, also of loss of appetite, nausea, fulness and distress after food, bad taste, very foul odor to the breath, and paroxysmal attacks of pain in the lower abdomen. There was considerable expectoration but no cough. The loss of weight had been gradual and amounted to twenty pounds during the last two years. There was no vomiting but considerable nausea, some belching; the bowels were costive. Headache was occasionally present, but no vertigo.

Physical Examination.—The patient was a medium-sized man with fair nutrition; no emaciation or cachexia; color pale. The teeth were in good repair. The tongue was coated white, and there was an intensely foul odor to the breath which was due to a fetid pharyngitis, and this was also the cause of the nausea, expectoration and bad taste. The lungs and heart were negative. The liver was palpable below the costal border. The abdominal aorta was tender and the radial arteries hard and thickened. The stomach was aspirated forty-five minutes after an Ewald test breakfast but no contents were obtained. The test breakfast was repeated one week later and 100 c.c. of contents obtained after thirty minutes. This showed poor digestion. Total acidity was 30. There was no free hydrochloric acid; no lactic acid; no Oppler-Boas bacilli. The occult blood test was negative; there was no mucus; the urine was negative, and no occult blood was found in the stools.

Diagnosis.—Arteriosclerosis; gastric subacidity.

Treatment.—Tincture of strophanthus 10 drops three times a day, and theobromin sodium salicylate 5 grains three times a day, and dilute hydrochloric acid 10 drops three times a day after food. Under this treatment the patient gained in weight and strength. The pharynx received local treatment. He is now, seven months later, enjoying good health.

Case 3.—*Patient.*—J. D., male, white, married, born in the United States, aged 50, real estate broker by occupation. His father died at 73 of apoplexy. He had had scarlet fever when a child and typhoid fever and lumbago in 1891; he had recovered after six weeks' illness. He took tea and coffee moderately and smoked to excess.

Present Condition.—The patient was well up to two years ago, when he began to have pain in the lower abdomen, coming on from one to two hours after eating, and fulness and distress in the same region, particularly after food. Belching and the passage of flatus were very annoying and distressing symptoms. The pain, which was intermittent at first, had become nearly constant for the previous three months. There was a constant dull ache to the left of the umbilicus which was somewhat relieved by lying down. The patient was much weakened. The appetite was increased; there was regurgitation of sour liquid occasionally; no nausea or vomiting. The bowels were usually costive. There was occasional headache. The patient was very nervous and slept poorly and had palpitation. No edema was present; loss of weight had been twelve pounds within a year.

Physical Examination.—Sclerosis of the radial arteries; an increased aortic second sound; abdominal distention and pulsation in the epigastrium; and a very tender abdominal aorta.

Diagnosis.—Arteriosclerosis.

Treatment.—Tincture of strophanthus 10 drops three times a day, and theobromin sodium salicylate 5 grains three times a day. In three days after the institution of this treatment the abdominal pain had disappeared; sleep was better and the patient recovered good health in a short time. Treatment for the so-called dyspepsia and distention had no effect until the vascular disease was attacked.

Case 4.—*Patient.*—M. H., aged 59, female, white, married, born in the United States, occupation housewife, lived on a farm and worked very hard. I saw her in consultation with Dr. G. M. Grim, of Ottsville, Pa., Aug. 23, 1908. Her mother died at 53 of tuberculosis; her father died at 70 from cause not known to the patient. One sister died of tuberculosis or gastric catarrh (?) Her husband and two children were living and well. The patient had had the diseases of childhood and typhoid fever at the age of 25.

Present Condition.—Outside of occasional attacks of vertigo for several years the patient was perfectly well up to April, 1908, when she began to feel weak, easily tired, and have headache occasionally. In May her appetite began to fail; nausea and retching appeared and had continued up to the time when the patient was seen. Belching, palpitation of heart and a gradual loss of weight were complained of; there was also some epigastric soreness and throbbing. In May the patient had an attack of diarrhea which lasted for four days. Almost everything she attempted to eat, for two months before I saw her, caused so much nausea that she could not swallow it; or if she did swallow it, most of the food was immediately rejected. During those two months she did not eat any bread. She had been confined to the bed most of the time for over a month. She expectorated considerable mucus but had no cough. The bowels were costive, and a small amount of urine was passed.

Physical Examination.—The patient was a medium-sized woman, with good color but poor nutrition; no cachexia or emaciation. She was unable to keep her false teeth in her mouth on account of the nausea. Heart beat was 110 per minute, but regular; the aortic second sound was increased; the radial arteries were atheromatous. The tongue was dry, red and fissured. The lungs were negative. The liver was palpable below the costal border. There was abdominal distention, pulsation and moderate tenderness of the aorta in the epigastrium. The stomach was normal in size and position; no mass was felt and no peristaltic waves were visible. The kidneys and spleen were not palpable. The patient had a chronic pharyngitis which was the cause of the nausea and expectoration. The physical examination was otherwise negative. The urine did not show any abnormalities.

Analysis of Gastric Contents.—After some difficulty I persuaded the patient to take an Ewald test breakfast; she protested that she could not swallow it, nor could she retain it. She did, however, take the breakfast and retained it. The gastric contents were aspirated in forty-five minutes and 70 c.c. of well-digested contents were obtained. An analysis of the same showed some pharyngeal mucus; total acidity 51; free hydrochloric acid 12; reaction to Congo positive; no occult blood and no Oppler-Boas bacilli found. This analysis showed the gastric motility and secretion to be normal.

Diagnosis.—Arteriosclerosis and chronic pharyngitis.

Treatment.—This was similar to that in the other cases, except that local applications were made to the pharynx, etc. The patient's diet was rapidly increased and I received a letter from Dr. Grim the last of October stating that he had not seen the patient in thirty days; that she considered herself well and had been doing her own work as usual.

Case 5.—*Patient.*—K. M., female, aged 61, married, white, born in the United States, a housewife by occupation, was seen on Sept. 2, 1908, having been referred to me by Dr. Joseph A. Moore, of Philadelphia. One brother died of tuberculosis at 51 years. One sister died at 67 of cancer of the gall bladder and liver. Another sister died of apoplexy at 70. The patient had had an attack of bronchitis in February, 1908.

Present Condition.—The patient was well up to July 4, 1908, when indigestion followed indiscretion in diet, and she had not been free from trouble with her stomach afterward. There was a burning sensation in the abdomen, fulness and distress, no vomiting, belching and a large amount of flatus. She had slight vertigo at times.. There was progressive loss of weight.

Physical Examination.—She had a faint mitral murmur and abdominal arteriosclerosis. The Ewald test breakfast showed gastric hypermotility, total acidity of 60; no free hydrochloric acid; no lactic acid .

Treatment.—This was similar to that given to the other patients. She improved nicely, and at the time of this writing Dr. Moore tells me that his patient has gained in weight and is enjoying good health.

The conditions of the gastric functions in four of those cases were: motility increased in three; normal in one; free hydrochloric acid, a trace in one, absent in two and normal in one; absence of lactic acid in all four, and no Oppler-Boas bacilli found. Peptic digestion was not determined in those cases; but I made an analysis in one other case recently and found peptic digestion to be normal, although hydrochloric acid was absent. In one (Case 3) no gastric analysis was made. Weakness and loss of weight are prominent symptoms in some cases. The abdominal aorta was tender in all the cases. The association of pharyngitis in two cases is of interest, as its symptoms had been misleading. Gastroptosis or visceroptosis was present in only one case. In some of the cases nitroglycerin or the other nitrites give relief when other remedies are of no benefit. All of these patients had been dieted and drugged for dyspepsia without relief.

Arteriosclerosis is frequently a cause of gastrointestinal symptoms in elderly people and the treatment usually gives gratifying results.

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LOCAL AND SYSTEMIC CONDITIONS DUE TO NASAL OBSTRUCTION *

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There is a disposition on the part of many physicians to attribute throat affections to the moist, changeable climate of our northern states. We often hear it stated that every one has "catarrh" in Michigan. As a matter of fact, catarrhal affections are no more frequent in Michigan than in most sections of the country. It is true that certain forms of catarrh are better in the dry, warm climate of the southwest, or in the steady cold of the northwest, but the study of climate alone does not offer a sufficient explanation of the prevalence of throat affections. It is also true that many individuals are comparatively free in any climate. Even if we admit that climate is an important factor we must face the practical problem of how best to adapt ourselves to the climate in which we are compelled to live.

It is my purpose to point out the underlying factors which render these patients particularly susceptible to repeated colds, and to suggest the proper line of treatment for their permanent relief. The unsatisfactory results which are obtained in the treatment of catarrh encourage us to search more carefully for the reason why permanent relief is obtained so seldom from the usual methods of treatment. It is a common observation that children affected with adenoids and adults with marked nasal obstruction are especially susceptible to colds, and also suffer from many general and local symptoms. This fact led me to study more closely normal nasal respiration, and to ascertain what effect, if any, a moderate degree of obstruction has on the resistance of the patient, and also to try to find out whether or not there is any relation between diseases of the respiratory tract and improper breathing.

We should determine, first, whether the nose is the organ through which the current of air normally passes in breathing, and, second, whether a moderate degree of mouth breathing is injurious to the organism. Four methods have been used to ascertain these points: first, study of the anatomy of the nose and throat of animals; second, histologic study of the organs; third, study of the effect of artificial closure of the nostrils in animals; and, fourth, clinical study on patients. In the lower animals the nasal passages are more nearly in a straight line with the larynx and trachea than in man. The larynx is placed higher in the throat, the epiglottis reaches to, or up in front of, the soft palate. The soft palate is more horizontal, and with the epiglottis it forms a curtain which closes the buccal from the nasopharyngeal cavity. These anatomic differences make mouth breathing more difficult than in man. The histologic structure of the passages in animals and man shows their use for respiratory purposes. The nasal passages are arranged to warm, moisten and filter the air before its entrance into the lungs. The mucous membrane of the whole tract is lined by columnar, ciliated epithelium, while the buccal cavity is lined by flat epithelium; it can be seen, therefore, that the respiratory tract is specially fitted for its peculiar function, while the mouth is in no way adapted for respiratory purposes.

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* Read before the Wayne County Medical Society, Nov. 23, 1908.

In laboratory research during the past year I have studied experimentally the effect of obstructed nasal breathing on about seventy-five animals—guinea-pigs. rabbits and dogs. A detailed report of the work will be published elsewhere, but the following results may be noted here: Complete closure of the nostrils of guinea-pigs is followed by death in from twenty-four to forty-eight hours. Partial closure is followed by death in from a few days to several weeks, according to the degree of obstruction, the age and the resistance of the animal. Rabbits with one nostril closed died after losing about one-half in weight. In a series of ten the average duration of life was forty-three and six-tenths days.

Partial closure of the nostrils of dogs is followed by symptoms resembling asthma and emphysema. The resistance of the younger dogs is lowered to such an extent that they die from infection, and the lungs were found to be diseased in every case examined. The changes in the hair are constant and peculiar. The hair becomes shorter, thinner and lighter in color, and a peculiar wrinkling of the skin is observed. Puppies born of a mother with obstructed nasal respiration showed lowered vitality, loss of hair, and wrinkling of the skin, and soon died. The anatomic differences between the throats of animals and man should be considered before transferring the results obtained from these experiments, but a careful study of my patients, over a number of years, has led me to the conclusion that the nose of man, as of the lower animals, is the organ through which the current of air should pass, and that even a *moderate* degree of obstruction to free nasal breathing is injurious.

It would be desirable, if possible, to determine the amount of nasal space necessary for normal respiration by some accurate method of measurement, but normal breathing is affected by so many factors that it is difficult to measure the current of air. In trying to ascertain the breathing space of a given individual certain facts should be borne in mind. We must remember that the total breathing space of the nose is measured by its narrowest part, that the current of air passes normally in a curved direction, upward and backward to the nasopharynx. An obstruction in the upper portion of the nose, such as an enlarged turbinal or a small adenoid mass in the nasopharynx, will obstruct normal breathing even though it does not prevent forced breathing. When patients are asked if they have free nasal breathing we often notice that they will hold one nostril and draw vigorously through the other one. This test is of no value, as the current of air is forcibly drawn through the inferior meatus, a portion of the nose not used in normal breathing. Seldom are the lower passages obstructed.

I insist that the test of nasal breathing be made while the individual is breathing quietly. The respiratory function is under the influence of the will and is affected by so many conditions that it is not always easy to determine the normal breathing for a given individual.

This point seems so important to me that an outline of the method of examination will be given. The breathing of the patient should be carefully watched before making an examination of the nose. To have the observation of any value the patient should be quiet and perfectly unconscious that he is being watched. If the lips are parted one can be reasonably certain that some air is inspired through the mouth. It is not necessary that the mouth be widely opened. Sometimes it will be noticed that the individual will breathe through the nose a portion of the time, but will occasionally open his mouth for an extra supply of air. In other instances, after a few shallow inspirations, the patient will take a deeper, sighing inspiration to supply the lack of air felt by the organism. The condition of true "air hunger" exists in these individuals, and is relieved by breathing partially through the mouth. In the majority of instances these patients are unconscious of the fact that they are breathing through the mouth.

It is always wise to try to convince the patient himself that he is a mouth breather. This can usually be done by giving him the following directions: Ask him to notice when he is reading or working if he can not catch himself breathing more or less through the mouth; also whether he notices occasionally that he takes in an extra breath through the mouth. Have him observe whether when walking along the street and breathing with the lips closed he does not find it necessary, or at least comfortable, to open his lips occasionally to draw in an extra supply of air. In a large majority of instances one or two days' observation on the part of the patient will convince him that he breathes more through the mouth than he has suspected.

The condensation test is of some value in *estimating* the amount of breathing space. The test is as follows: A polished, nickeled plate is used. It is more convenient *if the surface be divided into inch squares*. The plate is held perpendicularly in front of the patient's face, about an inch from his lips. He is directed to close his lips and breathe naturally through his nose. The moisture condenses on the cold surface and quickly evaporates. By noting the condensation from the nostrils the relative space in each nostril can be determined, and the amount of condensation is a *rough test* of the total breathing capacity. In order to have this test of any value the respirations should be as nearly normal as possible. An ordinary mirror can be used in the same way.

The examination of the nose should be carried on in a systematic and definite manner. Observe whether the alæ collapse with each inspiration, then whether there is an unusually heavy growth of vibrissæ at the entrance of the nostrils. By tilting the tip of the nose upward, the vestibule and the anterior portion of the nose can be observed, and the condition of the cartilaginous septum and the anterior ends of the inferior turbinals can be studied. Afterward the same structures can be better observed with the aid of the speculum. The application of a 4 per cent. solution of cocain in adrenalin, on a pledget of cotton, to the forward portion of the nose will give further information. If the inferior turbinal is swollen a shrinking will take place, but if there is hypertrophy of the structures the little shrinking that will follow will simply be the action on the vessels, as the hypertrophied tissue will be but little affected.

After the effects of the cocain and the adrenalin on the forward portion of the nose have been noted, the middle turbinal and the bony septum can be inspected. The condensation test can then be used to ascertain whether or not there is any gain in the breathing space. As the middle turbinal often narrows the space it should be carefully studied. It will often be found that it touches, or nearly touches, the septum. Cocain applied to this portion will usually not cause sufficient shrinking to give free breathing. With the rhinoscopic mirror the posterior ends of the turbinals can be observed and the nasopharynx studied. After a routine examination, as outlined above, it is usually possible to decide whether or not a given individual has proper breathing space.

The next point to determine is the effect of a moderate degree of obstruction on the health of the individual. Two methods are open to us: first, deductions from experiments on animals; second, clinical study of the symptoms of patients and the relief experienced after the obstruction is corrected.

From the study of artificially induced nasal obstruction in a large number of animals, I feel justified in concluding that the resistance of the animal is lowered and the respiratory tract becomes more susceptible to acute infections. Even partial closure of the nose leads to changes in the lungs. While we are not justified in transferring the results obtained with animals to man without certain reservations, the facts are interesting, and, to a large extent, are in harmony with clinical experience, and at least these results warrant further experimentation. There is no difference of opinion as to the injurious effect on the general health and local organs of marked nasal obstruction. We see it illustrated in children with adenoids and in adults with one or both nostrils completely blocked. I wish to emphasize that in like manner, though usually to a lesser degree, a similar train of symptoms occur in individuals who have a moderate degree of obstruction.

The direct effect of nasal obstruction, both generally and locally, is best illustrated by patients with free nasal breathing, suddenly obstructed by injury, as illustrated in the following cases:

CASE 1.—A boy, aged 14, was referred to me with the following history: he was a healthy, well-developed lad, with free nasal breathing until two weeks before coming under observation, when he was struck just above the tip of the nose by a baseball. There was free bleeding and the nose at once became swollen. As the swelling subsided it was noticed that the bridge of the nose was depressed, and both nostrils badly obstructed. There at once developed husky voice and dry throat with accumulation of mucus. The obstruction was relieved by raising the bridge and replacing the dislocated parts. Within a week after the packing was removed the voice was normal and the dryness and accumulation of mucus was relieved.

CASE 2.—A man had his nose crushed by a falling building. He was removed to a hospital where his wounds were dressed, but no attempt was made to raise his depressed nose. Four months after the injury he was referred to me. Since leaving the hospital he had lost flesh, his voice was husky, and his throat dry and he was subject to frequent colds. Several operations were necessary before the depressed bones could be raised and free nasal breathing obtained. As a result of his improved breathing he gained in weight, his voice became clear and he was not subject to colds.

The symptoms in these acute cases are very evident, but when the obstruction develops gradually the patient becomes accustomed to the impaired breathing, and, though the symptoms are similar, they do not stand out prominently, nor does the cause appear so evident.

There is a group of symptoms present in patients who have "catarrh" which is characteristic of impaired nasal breathing. A history of frequent colds starting in the nose or throat should make the physician think at once of nasal obstruction. Individuals with free nasal passages do not catch cold easily. A dry throat, more especially in the morning, or on waking in the night, is usually due to mouth breathing. Rarely it may be due to certain general conditions, as diabetes, or to that rare nervous affection, xerostomia. Impaired vocal function is common. The voice is often husky and is easily fatigued. Dropping of mucus into the nasopharynx, sighing respiration and frequent yawning are common symptoms. Bronchial asthma may be due to, or at least aggravated by, impaired nasal breathing. Besides the above group of local symptoms there are indefinite general symptoms that seem to depend partly or entirely on lack of proper breathing space. These patients are often under weight, easily fatigued, poorly nourished and may suffer from insomnia. Their breathing is shallow, and auscultation of the upper portion of the lungs show diminished breathing — the condition expressively designated "lazy lung." Dyspnea, palpitation of the heart and nervous symptoms have been noticed in my patients. These varied symptoms of air hunger are due to improper breathing. The proof lies in the fact that after the correction of the nasal obstruction the general condition will improve and many and sometimes all the symptoms will disappear. I have records of cases in which the general health greatly improved after obstructed breathing was relieved. A gain in weight of from five to twenty pounds has often been noted, and such symptoms as insomnia, dyspnea and palpitation of the heart have disappeared. All who are below par, who catch cold easily, or who have catarrhal symptoms, should have the nasal passages studied carefully. In considering the general symptoms other sources of irritation should be eliminated, and no nose should be operated on unless there exists in the nose itself reasons for such an operation. If even partial mouth breathing exists we are justified in advising such an operation, providing operative measures are feasible.

Patients naturally wish to know what they may expect from an operation They can be assured that operations on the nose are not dangerous, can be performed under local anesthesia, at the physician's office, without much pain and with but little loss of time from daily routine duties. The patients will promptly feel the sense of comfort and well-being that comes from free nasal breathing. The dryness of the throat will be relieved in proportion as the individuals breathe with the mouth closed. The mucus in the nose and the nasopharynx will be temporarily increased, then gradually decreased. The ultimate disappearance of the catarrhal discharge will depend on several factors; in a general way it will depend on the length of time that the mucous membrane has been affected. The younger patients are usually cured sooner than the older ones. Those with sinus disease are relieved much more slowly, and some direct treatment of the sinuses may be necessary. As a rule, after the first week or ten days the only treatment necessary is daily douching of the nose, which can be done by the patient. Enlarged tonsils, adenoids and other lesions of the throat should be corrected as far as possible. If the general symptoms are dependent on air hunger they will gradually disappear. Advice as to fresh air, proper diet and personal hygiene is always indicated.

I have tried to emphasize very strongly in this paper that the cause of many of the prevalent catarrhal conditions is improper breathing, and that we can not hope to improve our patients permanently unless we correct the manner of breathing.

There are certain individual peculiarities that make it difficult to give a patient proper breathing space. Some persons naturally have so narrow a nose that the usual operative measures are of little avail. The judicious removal of a small portion of one or both middle turbinals will sometimes gain enough room to relieve the condition to some extent. A marked convexity of the upper cervical vertebræ lessens the anteroposterior diameter of the nasopharynx. A high arched palate encroaches on the nasal cavity. Long-continued mouth breathing, especially in the young, is usually accompanied by changes in the shape of the jaws. These conditions should be considered before a prognosis is given or the proper line of treatment decided on.

Any condition which lowers vitality naturally makes the mucous membrane of the respiratory tract sensitive. Our artificial manner of living in close, badly-ventilated houses: the use of tobacco, alcohol and rich foods, especially if coupled with a sedentary life, aggravate catarrhal conditions. Constipation and gastrointestinal diseases are frequent complications.

If the observations which I have made are correct, the proper treatment consists in giving the patient free nasal breathing. The obstructions are usually due to deviated septa, enlarged turbinals—especially the middle—and nasal polypi. Rarer conditions are occasionally found. The above conditions are not permanently benefited by sprays or applications. Sprays are used altogether too much by the profession, as the curative value is exceedingly limited. If cleansing of the passages is desired the nasal douche is much more efficient.

Surgery offers accurate, safe and prompt relief for nasal obstruction. Under modern methods various obstructions can be corrected with a nicety unknown a score of years ago. We can hold out to the large majority of our patients the hope of permanent relief.

CONCLUSIONS

The evidence derived from the study of histology, comparative anatomy, experiments on animals and clinical observations shows that the nose is the organ through which the current of air should pass in normal breathing.

Nasal obstruction in animals is followed by dyspnea, lessened resistance and changes in the lungs.

Impaired nasal breathing, even of moderate degree, is the important etiologic factor in the causation of catarrh.

Lowered vitality, accompanied by a variety of general symptoms, is often due to nasal obstruction.

The aim of treatment is to obtain free nasal breathing. This can be accomplished in the majority of instances only by surgical measures.

606 Washington Arcade.

Hospitals for the Congo.—It is reported that the Belgian minister for the colonies has ordered the establishment of six lazarettos for patients suffering from sleeping sickness; they will be under the charge of Belgian physicians.

Clinical Notes

THE TECHNIC OF EXAMINATION FOR THE PALE SPIROCHETE BY DARK-FIELD ILLUMINATION

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The *Spirochæta pallida* in syphilis, despite the fact that it can not be cultivated on artificial media and hence does not fulfill all the requirements of the four rules of Koch as regards its etiologic connection with the disease, has become during the past two or three years an organism of relatively great importance in biologic and bacteriologic literature. The organism has been found so constantly by most observers in all stages of syphilis, from the primary to the tertiary lesion, that practically all authorities are convinced of its definite etiologic relationship. Its recognition by the ordinary methods in vogue has been a more or less difficult and time-consuming procedure. In so prevalent and protean a disease as syphilis any means of improved examination leading to early diagnosis should be welcomed by those whose duties frequently make it necessary for them to decide as to the specific or non-specific nature of a suspicious lesion.

The various staining methods outlined by Giemsa and by Goldhorn for secretion smears, and by Levaditi for tissues, for the most part have proven satisfactory. In some cases it may be possible to demonstrate the organism unstained by means of the oil immersion with or without compensation ocular, in hanging drop or simply on an inverted cover glass. Such a method requires much practice on the part of the observer, and is, on the whole, difficult and liable to inaccuracy because of the feeble refractive power of the organism.

The dark-field illuminating condenser for the examination of fresh unstained material from mucous patch, condyloma, indurated glands or the suspected primary lesion, leaves little to be desired in the way of convenience and for clearness of definition of the organism. The Rev. J. B. Reade of England first described in 1837 the principle of illumination involved in this condenser. By means of this apparatus ultramicroscopic particles or organisms of feeble refractive power are made visible in much the same way that particles of dust are visible against a dark background when the particles themselves are illuminated by rays of sunlight. The method was practically lost sight of until 1904-05, when Zsigmondy and Siedentopf made use of the principle in an apparatus for the demonstration of ultramicroscopic particles. Since that time various European optical firms have perfected the instrument under the name "Dunkelfeld-Spiegelkondensor."

This condenser, which in most forms can be attached to any microscopic stage, differs from the ordinary Abbe condenser in that only indirect reflected rays are admitted around a central diaphragm for the illumination of the object. The diaphragm itself serves as a dark background and it is in this contrast that the definition of the intensely illuminated object becomes more clearly outlined. The Abbe condenser, on the other hand, admits direct rays of light for the illumination of the object, the field as well as object being illuminated. In the dark-field condenser the object only is illuminated while the field is dark. In using the dark-field condenser, the Abbe condenser should be removed from the microscope, and a light of comparatively great intensity should be used. In my own work I have found the Nernst 32 Watt 110 volt direct current lamp, which gives about 160 candle power, satisfactory. For general convenience, however, an ordinary inverted Welsbach gas lamp which gives from 100 to 125 candle power is sufficient. The rays of light from the lamp may be concentrated on the microscope mirror (the plain side only of the microscope mirror should be used in this work) by interposing between lamp and mirror an ordinary convex magnifying glass of about 12 cm. diameter. This utilizes all available rays emanating from the source of light.

Concerning the choice of the various dark-field condensers now on the market, the Leitz instrument, which has a numerical value for the inner aperture of 1.10, gives in my experience good results if a light of greater power, such as the small arc lamp, is used. The Reichert latest type instrument (type Fb.)[1] gives a range of values for the inner aperture from 0.85 to 1.45 on a revolving disc, and, in addition, a miniature Abbe condenser which can be instantly revolved into position without removing the instrument from the microscope stage, for the examination of stained tissues, urinary sediments, etc. The low value for the inner aperture of 0.85 in this instrument makes it possible to utilize as source of light a lamp of less candle power, such as the inverted Welsbach. When it is convenient to use a small arc lamp, the apertures having a greater value than 1.0, such as in the Reichert instrument, 1.10, 1.20 or 1.45, should be used, as in this way greater contrast between the illuminated object and the dark background may be secured. The greater convenience of the Reichert instrument of this type lies in the fact that after being once centered on the microscope stage, it becomes a permanent part of it, there being no necessity for its removal for other routine work in the laboratory. The other instruments with which I am familiar make it necessary, when one wishes to examine stained bacteria, stained tissues or urinary sediments, to remove the dark-field condenser and replace the Abbe condenser.

TECHNIC

From a suspected primary lesion a smear is made after cleansing with a cotton swab, securing if possible some of the serum which exudes as a result of irritation with a small curette or the platinum wire. A drop of warm normal salt solution is placed on a thin slide. The secretion obtained by curette or wire is mixed with the drop and a clean cover glass inverted over it. Or one of the enlarged inguinal glands is seized between the fingers and its center punctured with a hypodermic syringe, through which a drop or two of gland juice is aspirated. A smear is prepared in much the same way from a mucous patch, bulla or condyloma latum. A drop of cedar oil is interposed between slide and condenser, not between cover glass and lens. The No. 7 Leitz dry objective with No. 3 ocular, or, as I have found best in my work, the No. 8 or No. 12 compensating ocular, is used. The No. 7 objective with compensating ocular No. 12 or No. 18, while requiring more intense illumination, gives better results, since the size of the organism is at least doubled, i. e., a magnification equal to a combination of 1/12 oil immersion and No. 3 ocular. If the oil immersion 1/12 is to be used with the dark-field condenser the lens should be returned to the manufacturer to be fitted with a diaphragm which has been found necessary for this work.

The spirochetes if present are seen as illuminated spiral-like organisms moving in wave-like motion across the field. In some preparations they are very abundant, while in others some search is necessary to find them. A little practice will serve in differentiating the pale spirochete from other organisms present in the specimen. In mouth lesions, tonsillar plaques and tongue fissures one must differentiate it from the *S. buccalis* and *S. dentium*. In fresh smears kept warm by allowing a little warm salt solution to flow under the edge of the cover glass from time to time, the motility of all these forms can be preserved for an hour or two. As a rule, however, the *Spirochæta pallida* loses its power of locomotion sooner than the others.

In a fresh specimen the organism is active, the spiral windings very thin and sharp, well differentiated and regular. The flagellum at the end of the *Spirochæta pallida* is very thin in proportion to the thickness of the body, while the end of the body is thicker than in most of the other forms. The flagellum is also longer, as a rule, than in other forms. The characteristic spiral movement of the *Spirochæta pallida* is forward and backward and when it attaches itself to a leucocyte it remains quiet often for a considerable time, even in fresh preparations. Hoffmann has stated that the other forms attach themselves less often to cells present in the smears. At times the *Spirochæta pallida* has a distinct sideway pendulum movement. It is more feebly refractive than the other forms commonly found and the windings or spirals are more acutely bent. The other spirochetes encountered most commonly are *Spirochæta balantidis* and *Spirochæta refringens*.

If one is careful to cleanse the lesion with a pledget of cotton wound on an applicator before obtaining the material on a sterile wire, and especially if the lesion is irritated with the wire after such cleansing, so as to secure an exudation of "irritation serum" from the deeper layers of tissue, the commoner forms of spirochetes are less seldom found. As a matter of fact, in the past few months I have examined the secretion from a considerable number of unclean mouths, from so-called canker sores, stomatitis, and from lesions of the gums, pyorrhea alveolaris, and the secretion of the glands about the glans penis, from small ulcers about the cervix and cervical lacerations, without in any instance finding an organism closely resembling the *Spirochæta pallida*. The *Spirochæta balantidis* and *Spirochæta refringens* will more or less frequently be found in the secretion obtained from the glans penis, vulva or vagina, but the differentiation of these organisms is not as a rule difficult.

THE EARLY DIAGNOSIS OF SYPHILIS

Hoffmann has shown by inoculation experiments that *Spirochætæ pallidæ* were present in the blood three weeks before the manifestation of the roseola; in fact, by the time the primary lesion has developed sufficiently to become noticable, the infection has already reached the lymph channels of the skin papillæ with free access to the larger lymph streams. Neisser has shown by excision experiments on apes that infection of the lymph channels of the skin papillæ probably occurs within eight or ten hours after the contamination of the area, which later through necrosis of superficial and deeper connective tissue cells we recognize as the primary lesion.

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[1] This dark-field condenser costs in Vienna $20.

Probably the first changes that result locally after the invasion of the lymph channels are in the form of a lymphangitis and perilymphangitis with obstruction of lymph flow and edema. Necrosis of the connective tissue cells is a concomitant part of the process with an abundant emigration of lymphocytes into and about the area of infiltration. The characteristic hardness of the initial lesion is in part due to the swelling of the surrounding lymph vessels as a result of the obstructive lymphangitis, in part as the result of edema and the filling of the tissue spaces with lymphocytes. The organisms probably do not reach the blood streams until somewhat later; that is, about the end of the period of incubation, when through the inflammatory process set up by them in the walls of the small veins and capillaries an obstructive endophlebitis and arteriolitis results with migration of the organisms through the delicate vessel walls.

The swelling of the neighboring lymph glands, so far as present knowledge goes, probably is merely the result of a protective hyperplasia against the invasion of the organism and its poison; not because the glands serve as particular breeding grounds for multiplication. The adjacent glands do, however, contain the *Spirochæta pallidæ* in large numbers coincidental with the development of the primary lesion.

IMPORTANCE OF EARLY DIAGNOSIS AND TREATMENT

Since we now have a method at our disposal by means of which an early diagnosis can be made from any suspicious genital, lip or mouth lesion, it goes without saying that such a method should be utilized in every case before passing judgment as to the harmlessness of the process. Negative findings do not of necessity mean that the process is not luetic, any more than one or two negative sputum examinations for tubercle bacilli indicates that the case may not be tuberculous.

Positive findings, however, at once make clear the nature of the condition and a large percentage of primary sores, mucous patches, condylomata lata and indurated lymph glands adjacent to the primary lesion will show the *Spirochæta pallida* by the method outlined above. Multiple lesions occurring from ten days to four or five weeks after exposure, while misleading because of their multiple character, should put one on guard and search for the organism should be at once instituted. In single lip or tongue lesions search should be made to ascertain their true character without waiting for so-called developments.

Neisser, Hoffmann and others have recommended with much wisdom the excision of the primary lesions as soon as the *Spirochæta pallida* is found, with the idea in view that at least an important focus of spread to others and to the general circulation of the patient himself will be eradicated. In view of the fact that the spread from the primary lesion to the lymph circulation takes place comparatively early in the ulcerative process of the primary sore, such excision if practicable should be done early. In many cases we may not be able to see that excision is carried out with the removal of a fair amount of healthy surrounding tissue. The next best thing to do will be thorough actual cauterization, preferably under an anesthetic, followed by application of a mercurial ointment. When such a procedure can not be carried out, the use of a mercurial ointment, such as a 10 per cent. white precipitate ointment or a 10 per cent. calomel ointment, may be recommended. The patient should also be brought under the constitutional effect of mercury as soon as possible. It is no longer necessary to wait for development of so-called secondary symptoms, since by getting the patient as early as possible under treatment the rapid multiplication of the organism can be controlled and the development of secondary symptoms ameliorated.

CASE OF VINCENT'S ANGINA

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An examination of the American literature for the past year shows very few reported cases of this disease. Undoubtedly, however, Vincent's angina is not so rare as this fact might lead one to think, and I have no doubt but that a positive diagnosis of this condition would be made much more frequently if, in addition to cultures, microscopic smears were made directly from the pseudomembrane. The well-known difficulty of making cultures of the two symbiotic organisms which are found in the lesions of this disease are sufficient cause for lack of reports. Positive diagnosis of Vincent's angina can not be made without a microscopic examination of smears made from tonsillar exudates. According to descriptions of this disease, the case to be reported is typical of the diphtheroid type:

History.—The patient, a woman of 22, a bank stenographer by occupation, had had diphtheria once, seven years before the present attack and had always been subject to sore throat until four years before the present illness, when she had parts of the tonsils and adenoids removed. The operation was not completed on account of severe hemorrhage.

Present Illness.—This began with sudden onset, the day previous to the patient's first visit. At that time she complained of sore throat, with considerable difficulty in swallowing, and with swelling of the neck due to enlarged glands at the angle of the jaw on the left side. She was not feverish but complained of loss of appetite and bad breath.

Clinical Examination.—The throat presented the following appearance: The remains of the right tonsil with soft palate and pharynx showed nothing abnormal. The upper half of the left tonsil, which had been left from the previous operation, was considerably reddened and presented a shallow ulcer about 1 cm. in diameter. Its base was rough and covered with a thin grayish membrane which stripped with some difficulty and left bleeding points. The edge of the ulcer was definite and fairly regular but not overhanging. Several glands at the left angle of the jaw were enlarged to the size of beans and were tender. The temperature was 99.2 and pulse 80.

Bacteriologic Examination.—A smear was taken from the floor of the ulcer and stained with Loeffler's methylene blue. The microscope showed enormous numbers of the characteristic spirochetes with moderate numbers of the accompanying fusiform bacillus. Only a few staphylococci were present in the smear. A culture made on blood serum showed at the end of twelve hours many colonies of *Staphylococcus albus*, some of the pneumococcus, but none of the diphtheria bacillus or the organisms found in the smear.

Course of Disease.—The ulcer was not affected by local applications or by cleansing sprays, but promptly improved under the internal administration of potassium chlorate. At the end of two weeks the throat was normal in appearance and the enlarged glands could no longer be felt.

139 Park Street.

PERSISTENT OMPHALOMESENTERIC DUCT WITH ACCESSORY PANCREAS

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Patient.—T. P., male, aged 2½ years, was brought to me January 6, 1908, the mother stating that the baby's umbilicus was sore and constantly moistened by a watery discharge. The birth had been a normal one, the cord came off within a week, and the navel was apparently normal until at the age of 20 months, the mother noticed a drop of blood coming from it.

Examination.—Some very small granulations appeared to be present at this time, but no tumor growth, and from that time on the navel remained red and moist.

History.—The granulations were cauterized several times with silver nitrate, and in December, 1907, shortly before they came to California it was curetted by their physician, Dr. Watkins, in Washington. After they came to me, on two different occasions I touched what appeared to be two small red granulations, with chromic acid, but the discharge continued. In March, 1908, the child was attacked by an acute infection, probably influenza. He was seriously ill, and then before he fully recovered an attack of pertussis developed. During this time, about six weeks, the mother paid but little attention to the navel, and on her return from a stay at the seashore she brought the child to my office. On inspection I found that since seeing the patient about a month previous, a small tumor mass had developed outside of, but connected by a pedicle to the umbilicus. This was one-half inch in diameter, round, red in color and very firm in consistency.

Treatment.—After excluding hernia in diagnosis I recommended its excision. This I did under chloroform anesthesia, and followed the excision by a thorough cauterization of its base by the electrocautery.

Result.—At this date, eight months after the performance of the operation, it has healed completely and no more moisture occurs at the umbilicus. Whether the result will be permanent or not, I am unable to say, but I judge from the histologic findings that there will be no more trouble.

Examination of Tumors.—A vertical section through the tumor mass shows the following condition: The tumor is solid, the outer covering is composed of a layer of intestinal glands. Below this is a layer of connective tissue, then comes the central portion of the tumor, which is composed of typical pancreatic tissue, lobes, lobules, acini and characteristic islands of Langerhans. No excretory duct can be found; but one was undoubtedly present, and through it the moisture came which caused so much annoyance. Forming the base of the tumor there is another layer of connective tissue and some unstriped muscle fibres.

The explanation of the histologic findings has been difficult to arrive at, and I have been unable to find any case reports showing a like condition.

The layer of intestinal mucous membrane evidently is due to a persistence of the omphalomesenteric duct; the pancreatic tissue is a so-called accessory pancreas, which evidently became displaced in early embryologic life. I find no records of an accessory pancreas having increased in size so rapidly as did this one; in fact, the largest gland I find a record of, reported by Thorel, is said to be the size of a two-mark piece. The usual size is from 1 to 2 cm. in diameter. The age of the child speaks against carcinoma.

Warthin, Bize and Ellis all report cases of accessory pancreas in which malignancy appears to be established, and all lay stress on the possibility of such an occurrence. In this case the growth can perhaps be otherwise explained. The pancreatic nodule probably was situated under the umbilicus, and it was forced out by the paroxysms of coughing during the attack of whooping cough from which the child suffered.

I report this case because of its unusual features, in order that it may be of record; only about seventy cases of accessory pancreas have been reported up to date and none in connection with a persistent omphalomesenteric duct.

A NEW DOUCHE PAN TO BE USED FOR IRRIGATIONS AFTER SUPRAPUBIC CYSTOSTOMY

GEORGE WALKER, M.D.
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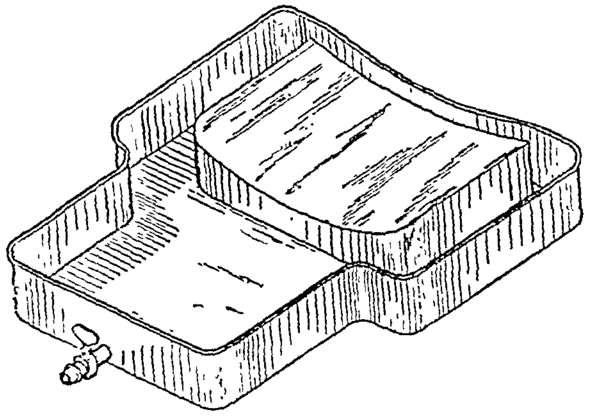
BALTIMORE

The illustration shows a douche pan which facilitates irrigation of the bladder after suprapubic section. It is an every-day experience that as the fluid comes out of the wound it runs in all directions and wets patient, bed and clothing. This basin has two lateral wings, which catch the fluid as it runs down over the sides of the patient, the remainder being caught by the middle portion. The part on which the back rests is separated from the posterior rim, so that any fluid which may run to it from around the patient's body will pass into the pan.



This basin has some decided advantages over the rubber pad: First, the patient does not lie in the fluid while he is being irrigated; second, it is more easily adjusted and can be removed more readily; third, it is made out of agateware or tin and is less expensive and more durable.

A somewhat extended use of this pan in my own practice has shown it to have a very definite value.

SPLENIC ANEMIA IN A FIVE-YEAR-OLD BOY

VAN BUREN KNOTT, M.D.
SIOUX CITY, IOWA

As the literature on splenic anemia or Banti's disease during the past five years has been both voluminous and contradictory, I shall make no effort to burden it still further with conjectures or with unverified opinions. It is my desire to place on record a case occurring in a child of 5 years, which is, so far as the literature at my command reveals, the earliest age at which the condition has been noticed.

History.—The patient, G. C., aged 5, male, was of American parentage and of negative family history. He began to walk when fourteen months old. Four months later he became unable to walk for some unknown reason, and at the same time developed squint in both eyes, recovering completely from both difficulties in six weeks. The following year he contracted measles and whooping cough, but recovered completely with no sequelæ.

Present Illness.—About June 1, 1908, the child began having attacks of severe abdominal pain, which usually appeared at night. These attacks came on nearly every night, were invariably accompanied by vomiting and would persist for a time, varying from ten minutes to several hours. A physician who was called at this time noticed an enlargement of the patient's spleen. His mother noticed a steady and progressive loss in weight and strength.

Physical Examination.—The child presented an extreme degree of anemia, was poorly nourished and complained of feeling tired. The spleen was found to be very much enlarged and tender to the touch. All other organs were normal. The child was unusually bright and intelligent.

Blood Examination.—Nov. 12, 1908: Hemoglobin, 32 per cent.; reds, 1,762,400; whites, 5,890; neutrophiles, 78 per cent.: large lymphocytes, 4 per cent.; small lymphocytes, 17 per cent.; myelocytes, 1 per cent.

On these findings a diagnosis of splenic anemia was made and splenectomy performed November 14.

Blood Examination.—November 19: Hemoglobin, 60 per cent.; reds, 2,336,000; whites, 4,560; neutrophiles, 70 per cent.: large lymphocytes, 6 per cent.: small lymphocytes, 19 per cent; myelocytes, 3 per cent.

November 24: Hemoglobin, 70 per cent.; reds, 3,760,000; whites. 3,800; neutrophiles, 63 per cent.; large lymphocytes, 70 per cent.; small lymphocytes, 28 per cent.; myelocytes, 2 per cent.

December 3: Hemoglobin, 82 per cent.; reds, 4,240,300; whites, 4,250; neutrophiles, 62 per cent.; large lymphocytes, 8 per cent.; small lymphocytes, 28 per cent.; myelocytes, 1 per cent.

As may be gathered from the above-recorded blood counts, the boy's improvement following the operation was most rapid and gratifying. He rapidly regained his strength, his appetite became ravenous and on the fourteenth day he was up playing around the hospital. It was thought advisable to keep him under observation a few days longer and he was not permitted to leave until December 4, twenty days after the operation.

Rarely have I seen a patient improve so rapidly as did this boy, and while it is much too early to consider this improvement as permanent, the prospects are most gratifying.

The points to which I desire to call particular attention are the following:

1. The tender age of the patient.
2. The steady and progressive nature of the illness and the disability occasioned by it.
3. The rapid convalescence and marked improvement both in appearance and in conduct after the splenectomy.

PATHOLOGIC REPORT BY DR. E. W. MEIS.

The spleen was 17.1 cm. in length, 9 cm. in width and 4 cm. thick; weight 500 gm; purplish in appearance and had not the triangular basal surface, but was long, resembling the pancreas in outline. On the cut surface the pulp manifested striking unusual pallor. Microscopic examination showed increase of connective tissue throughout the entire organ. This tissue extended deep into the pulp and enclosed large numbers of white cells. The connective tissue around the vessels of the spleen was uniformly increased. No other departures from the normal were noted.

Therapeutics

GONORRHEA IN THE MALE

The treatment of this disease has been recently presented in this department, but it is of such importance, and Dr. Max Hühner, New York, has recently presented (*New York Medical Journal*, Jan. 23, Jan. 30, and Feb. 6, 1909) so many valuable suggestions and urged so strongly the irrigation treatment, that we feel justified in again discussing the subject.

Hühner's discussion of the prophylaxis of this disease is most opportune and sensible. He shows beyond question that the consensus of the best opinion is that sexual intercourse is not necessary for the health of the individual. It is illogical to consider the sexual glands as allied to the other glands of the body, and, therefore, their specific activities, except that of their internal secretions, is physiologically intermittent, and prolonged or continued inactivity of their specific functions does not militate against their subsequent ability to perform their normal functions at any time during life. This declaration of what seems to be a fact shows that there is no necessity for illicit intercourse. Consequently, there is no necessity for acquiring gonorrhea.

There is no physical or microscopic examination that will positively determine that gonococci are not present in the glands or tissues adjacent to the vagina. Consequently, even if repeated examinations of vaginal discharges or secretions discovered no gonococci, the inability to infect could still not be guaranteed.

Hühner sums up his treatment of acute gonorrhea in the male as follows: If the patient is seen within thirty-six hours of the beginning of the discharge he tries to abort the disease by the administration of three injections of a 10 per cent. solution of protargol, at intervals of twelve hours, the first two injections to be held fifteen minutes, and the last one five During this period he would administer an alkaline mixture so long as there was pain on urination, and this pain is always more severe in a first gonorrhea than in subsequent attacks. He suggests the use of Professor Taylor's alkaline mixture as follows:

℞.	gm. or c.c.		
Potassii bicarbonatis	30		℥i
Tincturæ hyoscyami	15	or	fl.℥ss
Aquæ. ad	250		ad, fl.℥viii

M. et Sig.: A tablespoonful, in half a glass of water, every three or four hours.

If there is any local swelling he uses both hot and cold applications. He does not say which he prefers. The hot sitz bath seems to be the best treatment.

After using the above injection as directed, Hühner then advises a 0.5 per cent. solution of zinc sulphate as an injection, as:

℞.	gm. or c.c.		
Zinci sulphatis	50	or	gr. x
Aquæ	100		fl.℥iv

M. et Sig.: Use externally, as directed.

If the patient comes too late for the disease to be aborted, or if the abortive treatment is unsuccessful, he would begin deep urethral irrigations with potassium permanganate, 1 to 5,000, every day for the first two or three days, the solution being passed only with sufficient pressure to reach the deep constrictor muscle. After these two or three days he then would use sufficient pressure to pass the fluid into the bladder. Always before allowing the fluid to pass into the bladder he would wash out the anterior urethra with gentle pressure, to prevent the possibility of forcing any anterior urethral discharge into the bladder.

He defends the irrigation method on the theory that the ordinary urination and ordinary injection does not bulge out the urethra sufficiently to clean out the pus and gonococci contained in the folds of the mucous membrane, and this he believes irrigation does without injuring the mucous membrane.

On the third or fourth day he begins the vesical irrigations with the irrigator at a height of four and one-half feet above the bladder, and gradually increases the strength of the solution to 1 to 3,000. The irrigations are done daily until the discharge has entirely ceased, then every other day, and later the interval is further increased.

If there is a tendency to continuation of the morning drop, or if there is a large amount of discharge, after two weeks' treatment, he changes to silver nitrate injections and starts with 1 to 20,000 for the first day and increases the strength of the solution day by day until by the sixteenth day he has reached 1 part in 8,000. On the seventeenth day he again begins the use of potassium permanganate 1 part to 10,000, and then, daily, 1 part to 3,000. If at any time the solution appears too strong, as shown by too much reaction, he keeps the strength the same until the patient and the tissues are accustomed to it. "It is not wise to stop the irrigation treatment as soon as the discharge ceases, or even to stop increasing the strength of the solution."

Sometimes Hühner uses protargol solutions for intravesical irrigation, and with satisfactory results. He begins with 1 part in 16,000 and gradually increases the strength to 1 per cent., but he believes potassium permanganate to be the best irrigation solution.

If the patient can not come to the office to receive the irrigation treatment, he advises the use of protargol solution with the ordinary urethral syringe, but insists that the solution should be kept in the urethra from ten to fifteen minutes, actual time, and would have the injections used every four hours by day, and if convenient, once during the night. Such treatment will often cause a disappearance of the gonococci within a few days. The protargol solution may be increased to 1.5 per cent. and then to 2 per cent., depending on the pain that it causes. At the end of ten days he would have the protargol solution used three times a day, and a 1 per cent. solution of zinc sulphate used once a day.

A patient is never considered cured of gonorrhea until there is absolutely no discharge, after holding the urine for twelve hours, and this on several examinations. Hühner believes that any continuation of discharge whatsoever shows that the disease is not eradicated. Holding the urine for twelve hours seems a very long time, but Hühner states that it can be done without difficulty.

For its analgesic and soothing effect on the urethra Hühner at times uses adrenalin chlorid solution, 1 to 1,000, in place of nitrate of silver, especially in deep urethral congestion. He also advises its use in endoscopic work, especially if there is any oozing of blood, and he would even treat localized granulations and ulcerations in the urethra with the solution. He advises pouring into the endoscope from fifteen to thirty drops of a solution of the above strength, and states that he has used as much as a fluidram without noticing any bad or poisonous effects. The use of such amounts of the active principle of suprarenal on absorbent surfaces like mucous membranes is certainly dangerous, as death has been reported to have followed the injection of 10 minims into the urethra. Consequently, it would seem inadvisable to use more than a few drops of adrenalin chlorid, or other solution of suprarenal, in the urethra at one time.

Hühner treats chordee with a prescription which he attributes to Taylor. It is as follows:

R.	gm. or c.c.		
Extracti belladonnæ foliorum	.20		gr. iii
Extracti opii	.60	or	gr. x
Olei theobromatis	15		℥ss

M. et fac suppositoras, 10.
Sig.: Use one at night, as directed.

These suppositories may also be used with advantage when there is acute pain in the prostate, or in the bladder, with tenesmus and frequent urination.

Hühner does not believe that there is any advantage to be gained by the internal administration of methylene blue, and thinks the most useful internal medicaments are phenyl salicylate (salol), sodium salicylate, and hexamethylenamin (urotropin). He thinks that salol is the best drug to use after any kind of instrumentation of the urethra, and gives it as follows:

R.	gm.		
Phenylis salicylatis	6	or	ʒiss

Fac capsulas, 20.
Sig.: One capsule every two hours, until four or five are taken.

He administers the above after every passage of an instrument into the urethra, and believes that it prevents urethral chill, fever, and epididymitis.

If epididymitis occurs, he administers sodium salicylate as follows:

R.	gm.		
Sodii salicylatis	20	or	ʒv

Fac chartulas, 20.
Sig.: One powder, in water, every two hours, as directed.

He stops these powders as soon as any symptoms of salicylism appear, which must of necessity be soon when the salicylate is given in such doses at such short intervals. He does not state what local treatment he uses for epididymitis.

While he believes hexamethylenamin is of value as a urinary antiseptic, he does not believe that it has any effect, "either good or bad, in gonorrhea, either anterior or posterior, acute or chronic."

Hühner states his belief in the utter uselessness of oil of santal or any of its preparations in gonorrhea, but does advise the use of what he terms the Lafayette mixture, which would seem to be most intensely disagreeable to take and must soon cause digestive disturbances. He begins the use of this mixture in the third week of gonorrhea. It is as follows:

R.	gm. or c.c.		
Copaibæ	30		fl.℥i
Liquoris potassii hydroxidi	8		fl.ʒii
Extracti glycyrrhizæ	15	or	fl.℥ss
Spiritus etheris nitrosi	30		fl.℥i
Syrupi acaciæ	180		fl.℥vi
Olei gaultheriæ	1		gtt. xvi

M. et Sig.: A dessertspoonful, in water, four times a day.

[There can be no excuse in this age of therapeutic simplicity and pharmacal elegance for the perpetration of such a parody on both as is the above prescription.]

Hühner believes that a person recovering from gonorrhea is not cured so long as there is any discharge from the meatus. He would never pronounce a patient cured, until all treatment having been stopped for at least a week, the patient on his regular diet shows no discharge, stickiness or agglutination of the lips of the meatus, as noted by several examinations, held twelve hours after the last urination. He does not believe that the genito-urinary organs can harbor gonococci for any length of time without producing symptoms. He does not believe in gonorrheal relapses, but that the disease was there all the time, and uncured.

He states that an enlargement or tenderness of the prostate is not caused by instrumentation or by proper vesical irrigations, since he finds this condition of the prostate present even in a simple anterior gonorrheal urethritis. Therefore, he concludes such prostatic congestion as reflex or sympathetic

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SATURDAY, MARCH 20, 1909

THE BACTERIOLOGY OF THE FEMALE GENITAL TRACT BEFORE AND AFTER CHILDBIRTH

The question as to the part played by autoinfection in puerperal fever has received much attention during the last twenty years or so. The many and extensive investigations devoted to the solution of the question indicate at once the difficulty of its solution and the significance attached to it. Naturally, the object in view has been and is the establishment of a rational prophylaxis of puerperal fever.

It appears to be agreed that puerperal fever may arise from autoinfection, but opinions differ as to the precise meaning of the word autoinfection in this case. Some would limit autoinfection to infection with microbes present in the vagina during birth. For many years Ahlfeld has urged that puerperal autoinfection should include all those cases of puerperal infection in which hands, instruments, dressings, have no part, the infecting germs coming either from the external or internal genitalia or from foci present before birth and in the neighborhood of the genital organs. The special peculiarity of this comprehensive definition is the insistence on the possibility of pathogenic germs in the external genitalia spontaneously going up into the genital canal and thus causing puerperal fever. Inasmuch as all the earlier views on puerperal autoinfection accepted the occurrence in the vagina of bacteria capable of causing infection, the vaginal flora has been extensively studied, particularly with reference to streptococci and staphylococci and to the question of vaginal sterilization. Among the investigators in this field may be mentioned Döderlein, Krönig and Menge, and, in this country, Williams. The controversies and changes of have marked the progress of this investigation and that recent studies have revealed that during the normal puerperium immigration of bacteria into the uterus seems to occur in the majority of the cases without any necessary disturbance of the normal course of events, even though forms pathogenic for animals occur among the invaders.

In order to furnish a still broader basis for the consideration of puerperal autoinfection Natvig[1] undertook to make comprehensive bacteriologic examination and analysis of the parts involved before and after birth in the same case. In the series of ten cases studied systematically in this way under quite ideal conditions special attention was given to the occurrence of streptococci, and, in what seems to be a fully satisfactory manner, he could demonstrate the occasional spontaneous ascent of streptococci from the vulva into the vagina and even the uterus during the puerperium. More recently, and in order especially to study the spontaneous changes in the bacterial flora of the genital tract in the puerperium, Wegelius[2] studied a second series of ten cases according to Natvig's plan. His results show that before and during birth there is, as a rule, a sharp difference between the vulvar and vaginal flora. While the vulvar bacteria include numerous varieties, aërobic as well as anaërobic, the vaginal secretion contains principally the so-called vaginal bacilli. But during the puerperium the conditions in the vagina change completely owing to a gradual ascent of obligate and facultative anaerobes from the vagina. On the fourth day after birth the uterus contains, as a rule, a few bacteria of the kinds found in the vulva before birth; on the ninth day the number of bacteria is usually increased. In one case he found the vulvar and vaginal flora to be much alike before birth. Further studies are necessary to determine the number and the special causes for cases like this, which now would seem to be exceptional. No virulent streptococci were found in this series. As there did not occur a single fatal case of puerperal fever among the patients in the clinic, over 3,000 during the two years occupied by this study, it may be that there was no general dissemination of virulent streptococci at this time. Natvig's research, on the other hand, was carried out at a time when severe streptococcal infections were common.

Taking the chief results of Natvig's and Wegelius' painstaking and laborious studies together, it may be streptococci, as well as other bacteria.

external parts. The direct practical deduction from these results would be, as pointed out by Wegelius, to the effect that special care be given to disinfection of the external genitalia before and during birth.

THE CLINICAL IMPORTANCE OF HYPERSUSCEPTIBILITY

The phenomena which we now describe under the term hypersusceptibility or anaphylaxis were noted by Arloing in 1888, and described by Koch as early as 1890, but their significance was not appreciated at that time. During the course of the experiments which led to the introduction of tuberculin, Koch noted that guinea-pigs which had once been inoculated with living tubercle bacilli acted differently from normal guinea-pigs when a suspension of dead tubercle bacilli was injected beneath the skin. Whereas the normal guinea-pigs often developed a local suppuration, the tuberculous animals often died in the course of a few hours, or if they did not die, developed extensive necrosis at the point of inoculation. This hypersusceptibility was the basis of the diagnostic use of tuberculin as proposed by Koch, and is the basis of the other more recent methods of tuberculin diagnosis. Similar observations have since been made in diseases other than tuberculosis, and the introduction of serum treatment and of the use of bacterial vaccines has made the subject one of great importance.

A fatal reaction due to hypersusceptibility may occur during the administration of any protein material, and is seen in its most typical form after the injection of egg albumin into the guinea pig. The hypersensitiveness does not readily develop during the time such injections are being administered if they are given at short intervals but it may develop some time after they are stopped. Usually an incubation period of from seven to fifteen days is necessary to develop the changed behavior to a subsequent injection. In man the most serious results of hypersusceptibility have been seen in connection with the use of diphtheria antitoxin. Under its administration as ordinarily practiced, horse serum, with its alien proteins, is introduced into the system, and if the injections be far enough apart, or the individual unduly sensitive, fatal results, due purely to hypersusceptibility to the alien proteins and their selective action on the respiratory centers, may occur. There is little doubt that many of the fatal results following the administration of antitoxin have been due to hypersusceptibility produced by earlier doses. The studies of von Pirquet and Shick on the serum disease show that the minor manifestations of serum poisoning, the urticarias and other skin eruptions, the arthralgias, etc., are minor manifestations of hypersusceptibility. In tuberculosis a careful study of hypersusceptibility by Baldwin[1] shows that actual tubercle formation is generally necessary to develop a hypersusceptibility to tuberculin, though the continued presence of tubercle bacilli without tubercles, such as occurs in children occasionally, may lead to it.

The significance of hypersusceptibility has been overlooked in the past and still needs much elucidation. It is, without doubt, an attempt on the part of the body to resist infection. The fact that it is sometimes fatal does not militate against this conclusion. Natural methods of protection are by no means so invariably beneficial as they were once thought to be. Are not, indeed, the symptoms of most diseases merely the outward evidences of the battle which is raging within between the invaded body and the invaders? To what extent the symptoms in various infections are evidences of hypersusceptibility is yet problematical. The fact that many bacterial diseases have long periods of incubation is suggestive in this connection, as incubation is also needed for the development of anaphylaxis. Possibly future interpreters of the infections will be able, as our knowledge advances, to bring out satisfactorily the relation which exists between symptoms and susceptibility.

SCHOOL DIPHTHERIA AND THE GERM CARRIER

The well-known susceptibility of the young or immature organism to various kinds of infection makes the proper safeguarding of school children one of the primary duties of school hygiene. By far the greatest number of all deaths from diphtheria occur in young children. A speaker at the Third Congress of the School Hygiene Association, recently held in Chicago, pointed out that during the nine years, 1900 to 1908, 22 per cent of the population of Chicago (that part under 10 years of age) furnished 91 per cent of the total deaths from diphtheria.

The discovery of the importance of the living germ-carrier in disseminating diphtheritic infection is comparatively recent. At least four types of diphtheria-carriers can be distinguished: (1) the mild or unrecognized cases, (2) the convalescents released prematurely from quarantine; (3) certain nurses, physicians and members of the family who have been in more or less close contact with the patient or germ-carrying convalescent (this class is currently denominated "contacts"), and, finally (4) those persons who have never shown signs of illness and, so far as can be discovered, have had no recent contact with a germ-carrier, but who, nevertheless, harbor the specific germ.

The existence of Types 1 and 2 has been recognized for some time and medical school inspection has taken into account the importance of control. The danger from, or even the existence of, the other two types of diphtheria-carriers is not yet so widely known. It is unfortunately not yet the general practice to quarantine all the children of a family in which diphtheria is present and to release them only after two successive negative examinations of nose and throat, *whether the children have had the disease or not.* And yet many epidemics of school diphtheria have been traced to such "contacts." The effect of prophylactic doses of antitoxin in masking the presence of germ-carriers has not received the attention it deserves. When diphtheria appears in a family and all "contacts" are given a prophylactic injection of antitoxin, the antitoxin will prevent the development of acute diphtheria, but will not necessarily cause the disappearance of diphtheria bacilli from the throat. In certain individuals a kind of biologic toleration seems to be established between the bacillus and the human organism, so that the child becomes a chronic diphtheria-carrier, although remaining entirely well. In others an attack of diphtheria follows the wearing-off of the effects of the antitoxin.

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[1] Yale Med Jour, February, 1909

The fourth type of carrier, in whom no history of disease or of contact can be secured, is naturally more difficult to detect and control. In default of a routine bacterial examination of the throat and nose of all school children, the presence of germ-carriers of this class will usually come to light only when cases of disease due to their agency appear in a school or institution. The existence of such germ-carriers makes it imperative to trace to its source, so far as is practicable, every case of diphtheria developing in a school.

The danger from diphtheria-carriers is not an imaginary one. There is considerable evidence showing that diphtheria in schools is largely produced and kept alive through the agency of carriers. In an interesting description of a school epidemic of diphtheria in California, Ward and Henderson[1] demonstrated that it was possible to stop epidemic diphtheria in a public school through regulation of attendance by bacteriologic findings. In this instance no attempt was made to disinfect the school at any time during the epidemic, isolation of the demonstrated carriers proving quite sufficient. British health officers have reported many examples of the overwhelming importance of germ-carriers in spreading diphtheria. Crowley[2] has reported one case in which forty-two children out of ninety-three were acting as carriers of the bacillus. Vervoort[3] investigated the occurrence of diphtheria in a school in Amsterdam where quarantine of active cases, temporary closing and disinfecting of the school and other similar measures had failed to eradicate the disease. Bacterial examination of the ninety-seven persons attending the school showed that six were diphtheria-carriers; they were quarantined, the others were readmitted to the school and no new cases developed. In the United States M. Solis-Cohen[4] and Fisher[5] have recently recorded a number of diphtheria cases, attributable to the agency of carriers, in institutions, schools and private houses.

On the legal side, the relation of school and other public authorities to healthy germ-carriers does not seem to be clearly defined. Professor Moore states that in one such case in Ithaca, N. Y., the defendant secured competent legal advice that quarantine could not lawfully be maintained if the throat showed *macroscopically* no signs of disease; and this opinion was acquiesced in by the commissioner of the State Board of Health to whom the matter was referred.[6]

PUBLIC HEALTH LEGISLATION

The attempt to prevent disease by legislative enactment implies so modern an attitude of mind that one is a little surprised to discover the existence of such a wealth of historical and legal lore as that summarized in a recent study of public health legislation in the states of New York and Massachusetts.*

The earliest colonists in this country appear to have taken vigorous, although, as the event proved, pathetically futile, measures against the great pandemics of yellow fever, cholera and smallpox. These diseases swept over the feeble pioneer settlements with a devastating force that we of this sheltered generation can hardly realize. There were at least ten distinct epidemics of yellow fever in New York in the eighteenth century; there were over 4,000 deaths from yellow fever in Philadelphia in 1793 in a population of less than 60,000; over 8,000 persons in Boston in a population of about 19,000 contracted smallpox in a single year, practically all the rest of the population having had the disease previously.

It is worth while to have traced for us step by step the stumbling attempts to ward off epidemic invasion through quarantine, control of "noxious trades," improved methods of garbage disposal and other measures of doubtful efficacy up to the rigidly scientific, farseeing and highly efficient modes of safeguarding the public health practiced, for example, by the present State Board of Health of Massachusetts.

The student of public health affairs will find in the monograph just cited the most comprehensive and accurate study yet made of the progress of sanitary legislation in the United States. Dr. Peabody points out that in New York legislation in regard to health matters shows three distinct phases of growth, each occupying roughly a period of fifty years. The legislation of the first period consists almost wholly of attempts to keep out infectious diseases, chiefly yellow fever, by the method of quarantine; the second period is marked by the rise of the idea of local control of local health matters, especially "nuisances," and its extension to all cities and villages throughout the state: while the third period is characterized by provision for scientific inve-

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1. Calif. State Jour. Med., August, 1907.
2. Jour. Roy. Sanit. Inst., 1908, xxix, 226.
3. Hyg. Rundsch., 1908, xvii, 1459.
4. The Journal, Jan. 9, 1909, p. 111.
5. The Journal, Feb. 6, 1909, p. 439.
6. N. Y. State Jour. Med., February, 1901.

* Peabody, S. W.: Historical Study of Legislation Regarding Public Health in the States of New York and Massachusetts, pp. 158, Suppl. 4, Jour. Infect. Dis., February, 1909.

tigation and by the growth of centralization and increased efficiency of administrative machinery. Dr. Peabody also calls attention to the way in which much of the early legislation was directly instigated by great epidemics of a few specific diseases, notably yellow fever, cholera and smallpox. The breaking out of an epidemic seemed to be the signal for an effort to prevent by law the recurrence of another visitation. A remarkable table, showing the sequence of epidemics and resulting legislation, is given in an appendix to the monograph.

Legislation in Massachusetts does not, as in New York, lend itself to grouping into distinct periods. The New England form of local government was so soon established and the habit of local control early became so ingrained that health legislation from the beginning was primarily a matter of local concern. Other states of the Union have, as a rule, followed the lead of either Massachusetts or New York, the laws in some cases being copied verbatim.

One of the noteworthy facts brought out in the important study under consideration is the strong tendency toward centralization of public health interests and responsibility. This has been especially manifest in the case of New York, where there has been a steady trend toward increased dependence of the local boards on the state authorities. Even in Massachusetts, with its compelling traditions of local government, recent health legislation has shown a radical departure. The Massachusetts law of 1907 provided for the division of the entire commonwealth by the state board of health into fifteen health districts. For each district the governor and council are to appoint a state inspector for a term of five years. "The duties of these state inspectors are: to gather information concerning the sanitary conditions of their districts, especially in regard to tuberculosis; to disseminate knowledge of the best methods of preventing that and other diseases; to take steps for their eradication after consultation with state and local authorities; to keep themselves informed as to the health of minors employed in factories, and, if necessary, to call the attention of parents and employers to cases of physical unfitness; to enforce the laws for ventilation and cleanliness of factories, and perform other duties that formerly came under the jurisdiction of the inspection department of the district police." These sanitary inspectors are all under the direct supervision of the state board of health.

A highly centralized system of health administration exists in South Carolina. The board itself is selected by an unusual method, being composed of the members of the state medical association and acting through an executive committee recommended by the association and appointed by the governor, together with the state's attorney and the controller general *ex-officio*. The South Carolina board was empowered in 1901 to remove members of local boards on refusal or neglect to obey its orders.

The present strong and widespread movement toward vesting greater authority over health matters in the Federal Government is therefore only another manifestation of a tendency already active in the individual states toward the greater centralization of responsibility and authority in all hygienic and sanitary affairs. Much is to be said in favor of the contention that, just as no citizen in a thickly settled community is allowed to maintain an open privy in his back yard, so no important commercial and manufacturing center like Pittsburg or Philadelphia should be allowed to be a distributing center for typhoid fever, and no state like California permitted to become a breeding-ground for the plague. Restriction of the liberty of a part may be necessary to conserve the welfare of the whole.

One other topic relating to this important subject of health legislation may be briefly touched on. This has been frequently referred to in other connections in THE JOURNAL and its significance is sufficiently obvious. We refer to the growing importance of preventive medicine and sanitation. The development of modern conceptions of preventive and educative methods is reflected in a striking way in the character of recent legislation. This is not the place for a detailed consideration of this theme; it is amply illustrated and emphasized in the monograph under consideration.

THE NATIONAL NEGRO ANTITUBERCULOSIS LEAGUE

An example of the watchful service rendered to the sanitary well-being of the community by the Public Health and Marine-Hospital Service of the United States is afforded in the movement recently inaugurated at Savannah by the establishment of the National Negro Antituberculosis League. Advantage was taken of the opportunity afforded by the meeting of the State Agricultural College at Thunderbolt, Ga., to have Dr. C. P. Wertenbaker address the more intelligent colored people on the subject of tuberculosis and other infectious diseases, particularly as affecting their race. It is well known that whereas before the Civil War tuberculosis was rare among the colored people, it is now at least four times as prevalent among them as among the whites. In former times they lived a healthy out-door life, and, if for no other reason, in the commercial interests of their owners they were well fed, clothed and lodged. In the last half-century, however, they have left their open-air life and gravitated into the cities, without any one to overlook their physical well-being. Their happy-go-lucky disposition has led them to ignore all principles of sanitation—even if they had an opportunity of becoming acquainted with them—and this in the face of more confining work, harder in character, and for longer hours, while their pay does not enable them to live so well or so comfortably as under the old régime. Add to this the facility of access to a cheap grade of inferior liquor, which poisons the system and lowers the vital resistance, and the existing conditions appear merely a natural consequence. An organization which shall bring them together on the basis of instruction in sanitation and right living will surely aid in checking the advancing scourge of tuberculosis among them. The importance of this matter, however, extends far beyond the confines of the colored race itself. It must be remembered that under present conditions the colored people are thrown into close relationship with those of the white race. They act as house servants and cooks, take charge of children, etc., so that the spread of tuberculosis among them threatens to become a focus for the serious increase of the disease among the whites. It is to be hoped, therefore, that the white people themselves, in the south particularly, will realize the importance of supporting this movement in every possible way. It may be, even, that by directing their attention to the means of combating this scourge among their colored dependents a reflected advantage may ensue to themselves, through the unconscious personal adoption of many hygienic principles and practices at present only lightly regarded even by many of the more educated whites. The movement is a statesmanlike one and deserves wide support.

ANOTHER MARTYR TO MEDICAL SCIENCE

The time has passed when apology need be offered for bringing to the attention of the medical profession the fruits of investigations in comparative pathology. One has but to review mentally recent progress in medical research to recognize how intimately the fields of the biologist and pathologist have become amalgamated, or to recall the flood of light shed on the problems of human pathology through the agency of biologic and comparative pathologic studies. Among the contributions to biology and comparative pathology which have directly or indirectly influenced medicine, comparatively few have emanated from the United States. It is, therefore, more than an ordinary pleasure to note that among the series of excellent reports indicating the ever-increasing scientific productivity of the Hygienic Laboratory of the Public Health and Marine-Hospital Service is one dealing with a subject in comparative parasitology, and which, for painstaking accuracy, is a model of its kind. We have already reviewed[1] this report. Aside from its merits as a report of scientific research reflecting great credit on its author for his patient thoroughness, a melancholy interest attaches itself to this publication. It appears that Dr. William Whitfield Miller, whose promise for the highest grade of original scientific investigation was so brilliantly foreshadowed by the work under consideration, died shortly after its completion, of typhoid fever, apparently contracted while he was actively engaged in studying the origin and prevalence of typhoid fever in the District of Columbia—a task to which the Hygienic Laboratory had addressed itself on the suggestion of President Roosevelt. Thus came to an untimely end a career of much promise to American medicine, and another physician's name is added to the list of martyrs to science and to the cause of humanity.

A JUDGE'S IDEA OF THE DIAGNOSIS OF PERITONITIS

Judicial opinion has usually inclined to recognize the expert character of the physician, over the whole range of medical science, and this has often resulted in the admission of evidence by men whose opinions are justly entitled to little weight. But a recent decision by the Supreme Court of Minnesota[1] seems to go to the other extreme. In this case the court says: "The plaintiff's experts testified that peritonitis was present almost immediately after the railway accident: but it was all pure conjecture. No postmortem examination was held, and no attempt was made at any time to discover the kind of germs which were at work. The fact that a person is a practicing physician or surgeon generally qualifies him to testify as an expert, but in a matter of this kind the absence of special qualification may greatly affect the value of the evidence." The court was probably led by a consideration of the exactness of laboratory methods to overlook the fact that proof of the existence of disease must often depend on clinical rather than laboratory evidence. If any one could produce evidence of the existence of peritonitis shortly after the accident, it must be the attending physician who investigated the living patient, and it seems a strange proposition to say that a clinician can not be an expert in his own field. The diagnosis of peritonitis does not rest on the discovery of germs and can be made with reasonable certainty in advance of the postmortem examination.

Medical News

ILLINOIS

Special Colonies for Epileptics.—If the plan proposed by the State Board of Charities to the present legislature goes into effect and the appropriation of $803,000 sought is granted, three special colonies for epileptics will be established in the state; one at Kankakee, one at Anna, and a third for feeble-minded epileptics at Lincoln.

Personal.—Dr. George A. Zeller, superintendent of the Illinois Hospital for the Incurable Insane, South Bartonville, returned March 3 from a trip of observation and study through Europe.——Dr. Shelley B. Hall has been elected president; Dr. Joseph P. Comegys, vice-president, and Dr. Emily Wright, secretary-treasurer of the medical staff of St. Anthony's Hospital, Rock Island.

Tuberculosis Bill Wins.—By a vote of 140 to 2, the legislature on March 10, passed the Glackin bill, which authorizes cities and villages to levy a special tax of one mill to construct and maintain public tuberculosis sanatoria. The prime object of this bill is to secure for Chicago a sanatorium for tuberculosis, as the mill tax will amount to about $160,000 a year. The question of the issue of bonds will be submitted to voters at the coming election, and will undoubtedly meet with approval, and result in this good work being undertaken.

Chicago

Internes' Examination.—At the examination for internes in the county hospital and the county institutions at Dunning, held March 9-11, 120 applicants appeared.

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[1] Hygienic Laboratory Bull., No. 46; The Journal, Feb. 13, 1909, p. 586.

[1] Medicolegal Department, this issue, p. 991.

Personal.—Dr. Elmer E. Henderson has been appointed a member of the consulting staff of Cook County Hospital, vice Dr. Daniel R. Brower, deceased.——Dr. and Mrs. Harry S. Gradle sailed for Italy March 15.——Dr. Rosa Engelmann, for nearly fourteen years a medical inspector of the board of health, has resigned.

MASSACHUSETTS

Bequest to Hospital.—By the will of the late Mrs. Isabel M. Fowler, Jamaica Plain, Boston, $15,000 is bequeathed to the Margaret Pillsbury General Hospital, Concord, N. H.

Ask Appropriation for School Inspection.—The board of health of Chicopee has asked for an appropriation of $4,000, $1,000 of which is for the medical inspection of schools. Bu

Laboratory for Serum Diagnosis.—The department of pathology of Harvard Medical School announces the establishment of a laboratory for serum diagnosis, under the direction of Dr. Frederick T. Gay. The new laboratory undertakes to make diagnosis, and in addition offers facilities for research in problems connected with the physiology and pathology of blood serum and tissue fluids.

Personal.—Dr. Thomas Howell, superintendent of the Worcester Hospital, has been elected superintendent of the New York Hospital and House of Relief, Hudson Street, and will assume the duties of his new position May 1.——Dr. Charles P. Bartlett, house physician at the Massachusetts State Sanatorium for the Treatment of Tuberculosis, has been appointed superintendent of the New Hampshire State Hospital for Consumptives, to be erected at Glencliffe.——Dr. George O. Lavallee, Lowell, has resigned as a member of the Municipal Charity Board.——Dr. Raymond A. Kinloch, Springfield, has been elected secretary-treasurer of the Eastern Hampden and Hampshire Medical Association.——Dr. Francis H. Lally has been re-elected secretary of the board of health of Milford.——Dr. Joseph W. Heath has been made chairman of the board of health of Wakefield.——Dr. William J. Collins has been elected chairman of the board of health of Northampton.——Dr. William Y. Fox has been appointed a member of the board of health of Taunton.——Dr. William J. Sullivan has been elected president of the Lawrence Board of Trade.——Dr. Frank C. Granger, Randolph, is taking a trip to Cuba.——Dr. John R. Hobbie has been re-elected chairman of the board of health of North Adams.

MARYLAND

New Department in Academy.—A new department of hygiene and physiology has been formally established at the United States Naval Academy, Annapolis, with Surgeon Charles F. Stokes at its head.

Sanatorium Opened.—The Pine Bluff Sanatorium for the Treatment of Tuberculosis in Wicomico county, on a bluff near the Wicomico river thirty miles from Ocean City, has been opened under the charge of Dr. George W Todd, Salisbury.

Personal.—Dr. Harry F. Shipley, Granite, is ill with pleurisy at a hospital in Baltimore.——Dr. Alexander D. McConachie, Baltimore, has been appointed eye and ear surgeon of the Union Hospital of Cecil County, Elkton.——Dr. Hugh H. Young, Baltimore, is taking a trip to Jamaica.——Dr. Samuel T. Earle, Baltimore, who has been ill with appendicitis, has recovered.

MISSOURI

Tuberculosis Exhibit Ends.—The exhibit of the National Association for the Study and Prevention of Tuberculosis at Kansas City closed March 4. The attendance during the exhibit exceeded 45,000.

Personal.—Dr. Calvin Atkins has succeeded Dr. Benjamin F. O'Daniel resigned, as city physician of Independence.——Dr. Jacob Geiger, St. Joseph, has been appointed a member of the board of managers of State Hospital for the Insane No. 2, St. Joseph.——Dr. James A. Waterman, Breckenridge, has been appointed physician at the state penitentiary, Jefferson City.——Dr. Guthrie McConnell has severed his connection with the St. Louis Skin and Cancer Hospital.

Society Organized.—On the call of Dr. Enoch H. Miller, Liberty, physicans of the district met March 2 and organized the Twelfth District Medical Association, comprising the counties of Ray, Platte, Clay, Clinton, Davis and Caldwell. Dr. Robert W. Rea, Plattsburg, was elected president, and Dr. Clarence M. McConkey, Lathrop, secretary-treasurer.——The St. Joseph Medical and Surgical Society, which was organized in 1888, merged March 1 with the St. Joseph-Buchanan County Medical Society.

St. Louis

Superintendent of Medical College Dies.—Peter F. Fining, for more than thirty years superintendent of the old Missouri Medical College, and probably the best known layman to the medical profession in the city, died in St. John's Hospital, March 8 aged 72.

Society Organized.—The Society for Sanitary and Moral Prophylaxis has completed its organization and elected the following officers: President, Rev. George R. Dodson; vice-presidents, Dr. George Homan, and Messrs. Percy Werner and Jacob Firth; secretary, Mr. E. Hildenbrandt, and treasurer, Dr. Archer O'Reilly.

To Fight Optometry Bill.—The ophthalmic section of the St. Louis Medical Society has appointed a committee to combat the bill providing for the establishment of a board of examiners in optometry, recently introduced in the legislature. *It is significant that the better class of opticians is opposed* to this bill.

Examination for Internes.—The annual examination for interneships in the City Hospital will be held April 5. The position carries no compensation aside from room, board and laundry. All desiring to participate in this examination should register at the office of H. M. Edwards, clerk to the health commissioner and board of health, on April 2 or 3.

Thanks from Society.—The St. Louis Medical Society on March 6 adopted resolutions thanking former councilman August H. Hoffman for his offer to withdraw from the board of freeholders in favor of a physician. The efforts of the allied medical society and the general medical council to secure a physician as a member of the board of freeholders is said to have failed owing to the injection of politics into the question.

MONTANA

Suit Dismissed.—Failure of the state's attorney to produce evidence to show that William Metzger had practiced medicine February 12, without a license, at the time the complaint was made against him, resulted, February 24, in the dismissal of the suit against the defendant in the Anaconda police court.

Elections.—At the annual meeting of Silver Bow County Medical Association, held in Butte February 24, the following officers were elected: Dr. John A. Donovan, president: Dr. Peter Potter, vice-president; Dr. Phoebe A. Ferris, secretary; Dr. Gideon E. Blackburn, treasurer; Drs. Willis V. Kingsbury, John McIntyre, Richard C. Monahan, John A. Donavan and Carl L. Larson, trustees; Drs. Herbert D. Kistler, Cheswell T. Pigot, John Frisbee, William L. Renick, Willis V. Kingsbury and W. Colfax Matthews, delegates to the state association, and Drs. Thomas C. Witherspoon, McCormick Smetters, M. J. Scott, Richard C. Monahan, John M. Scanland, John McIntyre and Alfred Karsted, alternates.——At the meeting of the Yellowstone Valley Medical Association, March 4, Dr. W. H. Johnson, Billings, was elected president; Dr. Leonard M. Line, Columbus, vice-president; Dr. William L. Bishop, Billings, secretary, and Dr. Carl Schulin, Billings, treasurer. The next annual meeting will be held in Billings.

NEW YORK

Founds Scholarship.—By the will of the late Dr. Charles H. Roberts, Highland, five scholarships of $240 each annually, are founded at Cornell University.

Will Appoint Medical Experts.—A bill has been introduced into the legislature which requires the Supreme Court to designate at least ten and not more than sixty physicians in each judicial district as medical expert witnesses to serve when called in any civil or criminal action by the court or either party, for such compensation as the presiding judge at the trial allows, and to be at once paid by the fiscal officer of the district in which the trial is held. The bill does not limit the rights of parties to call other expert witnesses as at present.

New York City

Spitters Arrested.—A general raid was made in Brooklyn and Manhattan February 9, by officers of the sanitary squad, and more than 200 offenders against the anti-expectoration ordinance were arrested and fined.

Lectures on Diseases of the Skin.—The tenth series of clinical lectures on Diseases of the Skin, by Dr. L. Duncan Bulkley, was commenced March 10, in the Out-Patient Hall of the New York Skin and Cancer Hospital, and will continue on successive Wednesday afternoons beginning at 4:15 p. m. The course is free to the medical profession.

Tuberculosis Clinic in Brooklyn.—On March 8, the Bay Ridge Hospital and Dispensary opened a tuberculosis clinic. This is the second clinic for tuberculosis patients in Brooklyn, the other being maintained by the Board of Health. This clinic has been fitted up by the New Utrecht Red Cross Society in connection with the ladies' auxiliary of the hospital.

Personal.—Dr. Alonzo Blauvelt has been assigned to duty by the board of health as assistant superintendent in charge of the Borough Brooklyn.——Dr. Patrick J. McHugh, formerly of Brooklyn, is seriously ill in Fordham Hospital.——The directors and advisory board of the Hospital for Deformities and Joint Diseases gave a dinner March 6, in honor of Drs. Henry W. and Herman C. Frauenthal, at which silver loving cups were presented.——Dr. L. Duncan Bulkley has returned from a trip around the world, in which he visited many hospitals in the different countries in the far east. The lectures on April 21 and 28 of the course elsewhere referred to are to be on "Diseases of the Skin as Observed in the Far East."

Sanitary Science and Public Health Lectures.—This course of lectures given by the College of Physicians and Surgeons of Columbia University announced for March 15 a lecture on "Public Health Problems of the Nation." by Dr. Walter Wyman, Surgeon-General, P. H. and M.-H. Service; on March 17, "Milk Supplies and Public Health." by Dr. Wm. H. Park; on March 22, "Infant Mortality and Its Reduction." by Dr. L. Emmett Holt; on March 24, "The Prevention of Tuberculosis," by Dr. Hermann M. Biggs; on March 29, "School Hygiene and Sanitation." by Dr. John J. Cronin. and March 31. "Street Cleaning, Garbage Collection and Refuse Disposal," by Dr. Walter Bensel.

Buffalo

Unlicensed Practitioner Imprisoned.—Francis J. C. M. Lambert. who plead guilty to an indictment charging him with practicing medicine without a license, is said to have been sentenced February 10, to imprisonment for six months in the penitentiary.

Annual Banquet.—The annual banquet of the Buffalo General Hospital Alumni Association was given at the Hotel Statler February 18. About seventy-five physicians were present. Dr. P. W. Van Peyma acted as toastmaster and Dr. Roswell Park, who recently completed his twenty-fifth year of service on the staff of the hospital, read a paper on "The Next Quarter Century in Surgery."

Communicable Diseases.—The board of health has officially declared scarlet fever epidemic.——There is now a bill before the legislature which will enable Buffalo to bond itself for $200.000 for a hospital for contagious diseases. and also a bill to allow the city to bond itself for the same amount for a hospital for tuberculosis.——The health department has temporarily converted an abandoned school house into a hospital for scarlet fever cases.

Personal.—Dr. Edwin A. Bowerman has been appointed police surgeon. vice Dr. Joseph Fowler, deceased——Dr. F. Park Lewis will spend several months in travel in Italy.——Dr. James E. King has assumed control of Lexington Heights Hospital.——Dr. and Mrs. Lucien Howe are attending the International Ophthalmologic Congress in Naples.——Dr. Jacob Goldberg has been elected chairman of the board of school examiners.——Dr. Silas Hubbard. said to be the oldest living graduate of the Buffalo Medical College, has contributed $1,000 to the cause of the greater university.

OHIO

Loses Suit.—In the suit for damages brought by Harry Simmerman against Dr. Edna T. Matthews, in which the plaintiff claimed that a knee cap had been hurt in an automobile accident, the jury is said to have rendered a verdict for $275.

Personal.—Dr. James E. Torrence, Hamilton, who has been critically ill at Mercy Hospital, is reported to be convalescent. ——Dr. John P. DeWitt has been elected president. Dr. Lawrence E. Flickinger vice-president, Dr. Clare E. Fraunfelter. secretary, and Dr. Thomas H. Shorb, treasurer of the medical staff of Aultman Hospital, Canton.

Postgraduate School.—In November last, Drs. Howard B. Hills, Arba S. Green, Harry McGarvey. Thomas J. Arundel. John W. Veach and Elmer W. Coe incorporated the Youngstown Postgraduate School of Medicine and Surgery. The organization is a corporation not for profit. its primary object being to teach by lectures and demonstrations on the cadaver, and to put the study class in a position to get anatomical material for the purpose of dissections and operative surgery. Dr. Hills is president and professor of diseases of the eye, ear, nose and throat; Dr. Green, vice-president, professor of obstetrics; Dr. Arundel. secretary-treasurer. and professor of materia medica and therapeutics; Dr. McGarvey, professor of anatomy; Dr. H. H. Thier. professor of pathology and bacteriology; Dr. John K. Hamilton, professor of physiology; Dr. John W. Veach, professor of gynecology; Dr. Elmer W. Coe, professor of operative surgery; Dr. Sidney M. McCurdy, demonstrator of anatomy; Dr. Wilbur W. Ryall, professor of diseases of children, and Dr. John W. Shaffer, professor of internal medicine. Two or three times a week lectures are delivered by members of the faculty, and the anatomical room is open in the evening. It is hoped as soon as circumstances permit, to extend the privileges of the school to all practitioners of the city and vicinity.

Cincinnati

Personal.—Drs. J. Louis Ransohoff and Alfred P. Cole have been appointed cystoscopists to the Cincinnati Hospital and Drs. Alfred Friedlander and Frank Lamb have been appointed juniors in the pediatric service of the same institution.——Dr. William H. Strietmann has been appointed curator at the City Hospital, vice Dr. Harry Freudenberger.

Withdraws from Political Activity.—Dr. Charles A. L. Reed has sent a letter to his leading political friends, both physicians and others, in Ohio. in which he states that after having devoted a large amount of his time for twenty years to public affairs. he feels he now has the right of exemption from further service and will hereafter devote himself exclusively to professional work.

Academy Matters.—The Surgical Section of the Cincinnati Academy of Medicine has elected Dr. J. Ambrose Johnston. chairman; Dr. Casper F. Hegner, secretary. and Dr. Robert Carothers, committee on program.——At the meeting of the Academy January 25, the report of the committee on reorganization was adopted. This report provides that the work of the academy shall be divided into three sections, medical, surgical and specialties, each section to have a committee of three on program, whose chairman shall be chairman of the section. The first meeting of each month is to be devoted to the section of specialties: the second to the surgical section, the third to the medical section; the fourth meeting to case reports and presentation of cases and specimens. and the fifth, when it occurs, to some allied general subjects such as medical economics, medical education. etc. The chair is annually to appoint two members from each specialty represented. to organize the various sections and elect their officers. Nominations shall be made at least two weeks before the annual election by a nominating committee or from the floor of the academy; the annual election is to be held on the day of the annual meeting, the polls to be open from 6 to 8 p. m. and no member will be permitted to vote whose dues have not been paid for the previous year.

PENNSYLVANIA

Hospital Examinations.—An examination for six resident physicians for the Mercy Hospital. Pittsburg, will be held in the University of Pennsylvania. Philadelphia, March 27.——The annual examination of candidates for the resident staff of the Presbyterian Hospital, Philadelphia, will be held in the hospital, April 15.

State Farm for Insane and Convicts.—The creation of a central state institution for the maintenance of all charges of the state—insane, feeble-minded and criminal—where a farm can be operated and the institutions be made partially self-supporting. is foreshadowed in a resolution presented in the house March 8. The resolution provides for a commission to inquire into the cost of land, buildings and operation of such an institution and the practicability of the state undertaking the project in the interest of economic administration.

Money for White Haven Sanitarium.—At the annual meeting of the Free Hospital for Poor Consumptives and White Haven Sanitarium Association. March 8, Dr. Lawrence F. Flick announced that Mrs. Henry Phipps. wife of the founder of the Phipps Institute of Philadelphia. had donated $12.000 to the institution for the erection of a memorial cottage to be known as the Henry Phipps. Sr.. Cottage. Donations were also announced of $1.000 from the members of the Coxe family; of $500 from Frank G. Thompson. and of $300 from Miss Thompson. These sums are to be applied to the funeral fund of the association.——The report of the sanitarium for 1908 shows that 890 patients were cared for. The disease was arrested in 141 cases, 119 patients were much improved, 291 were improved, 86 were not improved, and 11 died. The average cost of maintenance per patient per week was $7.88. The total amount expended for maintenance was $84,005.30 and the total amount expended during the year, $142,408.69. The institution consumed 218,560 quarts of milk and 438,360 eggs. It was announced that after June 1 the institution will abandon its free beds and charge $7 a week for the beds that had previously been free. The association will refuse to accept the $35,000 which they have received annually from the state and will rely on voluntary contributions for the funds needed for maintenance and for the $20,000 required for the new administration building.

Philadelphia

City's Milk Consumption.—The report of the Philadelphia Milk Exchange for 1908 shows a marked increase in the quantity consumed in the last ten years. The report gives the total of 140,362,996 quarts received at the various receiving stations in this city and Camden, during 1908, as against 94,719,082 quarts in 1898. The largest quantity of milk received in a single month was 12,926,544 quarts in May. The figures in the report cover the registered milk supply.

Personal.—Dr. Ella B. Everitt, professor of gynecology in the Woman's Medical College, has been appointed attending obstetrician to the Philadelphia General Hospital to fill the vacancy caused by the resignation of Dr. Elizabeth L. Peck. ——Dr. Lewis Brinton and Dr. Eugene J. Asnis will conduct a postgraduate course of instruction on diseases of the stomach and intestines at the American Hospital for the Diseases of the Stomach, beginning April 1.——Dr. Lawrence F. Flick has been re-elected president of the White Haven Sanitarium for Poor Consumptives.

Tuberculosis Exhibition.—The International Tuberculosis Exhibition continues to attract thousands of visitors daily, and on March 13 25,817 persons visited the exhibition, making the total number of visits to that date 436,415. By Monday it is estimated that fully 500,000 persons will have witnessed the exposition. This is a little less than one-third of the entire population of the city. In proportion to the population the number of visitors viewing the display has been much greater than when it was held in New York. Councils have appropriated $5,000 toward the expense of the exhibitions.

GENERAL NEWS AND COMMENT

Coming Meetings.—The American Society of Tropical Medicine will hold its sixth annual meeting at the United States Naval Medical School, Washington, D. C., April 10, under the presidency of Dr. James M. Anders, Philadelphia, the subject of whose annual address will be "A Review of the Year's Progress in Tropical Medicine." At the afternoon session there will be a symposium on "Pellagra."——The mid-year meeting of the American Academy of Medicine will be held in the Auditorium Hotel, Chicago, March 25. Among the important subjects for discussion will be "What Constitutes a Liberal Education in the Twentieth Century?"

Sanitation of the Canal Zone.—The report of the department of sanitation of the Canal Zone for December, shows a sick rate of 25.95 per 1,000, which compares favorably with 27.16, the sick rate for November. The deaths for the month show a considerable increase over the previous month, mainly due to the fact that 48.6 per cent. of the total number of deaths during December were from violence, the largest in the history of the work on the Isthmus. Eliminating these deaths, the mortality shows an annual rate of 12.81 per 1,000, which also compares favorably with the record for December, 1907, which was 14.69 per 1,000. Malaria shows a diminution of 214 cases over the previous month. The Panamanian territory shows a death rate of 33.28 per 1,000 per annum, while the Canal Zone for the same period reports a rate of 20.75. No yellow fever, smallpox or plague is reported in the Canal Zone, Panama or Colon.

FOREIGN

International Congress for Pediatrics.—The Paris *Société de Pédiatrie* is agitating the question of a national association of pediatrists and of an international congress. At the meeting January 19, provisional statutes and by-laws for each were discussed and adopted, so that the matter will now be pushed. The committee in charge is headed by Dr. Barbier, and the secretary of the *Société de Pédiatrie* is M. Apert, 14 rue de Marignan, Paris, who is also the editor of the bulletin published by the organization.

Postgraduate Courses in Differentiation of Plague and Cholera.—The Spanish authorities have recently organized a course of lectures at the Madrid Institute for Bacteriology, for training physicians to diagnose plague and cholera. The course is compulsory for all sanitary officers, and medical officials connected with quarantine stations or seaports. The bacteriologic course is given by Professor Mendoza, and the medical officials are detailed in squads to attend the course which he has to repeat about six times in each three months.

Foundation of Radiologic Society at Paris.—The *Société de Radiologie Médicale* has been founded at Paris with 79 members already enrolled and a monthly bulletin of 24 pages distributed. The list of members includes Mme. Curie, Arsonval, S. Leduc, Oudin, Sabouraud, Wickham and Widal and other names well known to science, and 25 additional candidates had applied by the second meeting. Béclère is the president of the new society, which is open to all physicians interested in radiology and endorsed by two members; non-residents pay $3 dues. The secretary's address is Dr. Haret, 8, rue Pierre-Haret, Paris. The first meeting of the new society was devoted to discussion of filters for the Roentgen rays, especially aluminum filters, and the quality of the rays in rapid radiography.

Second International Congress on Industrial Accidents.—The subjects to be discussed at this congress, which convenes at Rome, Italy, May 23 to 29, are the medico-surgical and medicolegal aspects of industrial accidents and their consequences; differentiation and prognosis of neuroses following industrial accidents and estimation of the working capacity of the injured before and after the accident. This latter theme includes study of measures to aid in such estimations, study of the predisposition, preceding affections, sociologic and anthropologic criteria, race, age, sex, criminality, etc., and the influence of examinations, damage suits, etc., on the outcome of the accidents. Statistics are also to be presented in regard to the application to date of the legislation on industrial accidents. The fate of injured joints is also to be investigated. The secretary general, Professor Ascarelli, may be addressed for further particulars, via Bourgognona, Rome, Italy. Professor Ottolenghi, chief of the Institute for Forensic Medicine, at Rome, will preside. The subscription is $4.

LONDON LETTER

(From Our Regular Correspondent)

London, March 6, 1909.

The Polyclinic

A new scheme of work has been adopted at the Polyclinic. Hitherto the morning has been devoted to classes and laboratory work and at 4 p. m. there were clinical demonstrations and consultations, more or less of the character of a lecture, but usually informal and extempore. At 5:15 p. m. there was a lecture on some set subject. In the future these arrangements will be supplemented by additional work. On at least two days in the midweek, the afternoon's work will commence at 3 and the additional hour will be devoted to some special topic. When desirable the topic of the week will be allowed to predominate in some degree on the other days, and especially it may influence the subject of the 5.15 lecture. The arrangements for the weekly special topics will consist in the demonstration of patients, the production of classified portraits, the delivery of short lectures and open discussions. The week's topic April 12 to 16 will be "Prolapsed Kidney." The following arrangements have been already made: April 12, 5:15 p. m., lecture on "Details of Operations for Prolapsed Kidney." April 13, at 3 p. m., lecture on "Anatomic Considerations and Local Consequences of Prolapse of the Kidney," and at 5:15 p. m., lecture on the "Symptoms of Prolapse of the Kidney and Methods of Examination." April 14, discussion on "Certain Special Symptoms Attributed to Prolapse of the Kidney (Pain, Ill-Health, Melancholia and Insanity)." At 5:15, "Details of Operations for Prolapse of the Kidney and Their Results." April 15, at 3 p. m., continued discussion on "Symptoms and Treatment," and at 5:15 p. m., "Are the Results of Operations for Prolapse of the Kidney Lasting?" On April 16, at 3 p. m., there will be a continued discussion. Other lectures will deal with special aspects of the topic in hand, and on the last day a special effort will be made to collect as many examples as can be obtained. For these two objects the Polyclinic possesses unusual advantages. It has an extensive collection of portraits of disease in the Hutchinson Museum and a unique library of books containing extracts on all subjects collected for many years by Sir Jonathan Hutchinson.

Infantile Mortality

An important deputation of the National Conference on Infantile Mortality has been received by the prime minister, accompanied by the president of the local government board, the president of the board of education and the parliamentary secretary to the local government board. Miss Ravenhill of King's College, London, spoke of the need of teachers being trained in subjects dealing with motherhood. Dr. Spotiswood Cameron of Leeds urged that all preparations sold as food or drugs for infants should be certified by government analysis as non-injurious, and that the composition should be set forth on the label. After other members of the deputation had spoken, the prime minister said that it was impossible to conceive any subject of greater importance to the nation than the one laid before him. He congratulated the deputation on having obtained recognition, either by the legislature or by administrative changes, in respect to 11 out of the 14 points with which their body had determined to deal. The president of the board of education said that the board were attempting both in the elementary and secondary schools to devote more attention to domestic subjects. Last year hygiene was made a compulsory subject for teachers. The president of the local government board said that the organization could congratulate itself on the fact that since it was formed, two years ago, 15,000 more children's lives were saved and there were healthier children, too. The death rate under the age of 5 years was 57 in 1900 and had now fallen to 41. With regard to the question of food, he had established a special department to deal with it. The physicians at the head of this department were engaged in an inquiry into the character, quality and composition of infants' foods.

Deaths Under Anesthetics

In his annual report to the corporation, Dr. F. J. Waldo, coroner for the city of London, makes many suggestions of a far-reaching character with regard to the administration of anesthetics. The available data as to deaths under anesthetics are so imperfect as to be useless for the purpose of investigation and it is desirable to arrive at satisfactory conclusions for the safety of the public and the furtherance of science. Dr. Waldo makes the following recommendations with a view to lessening what he regards as unnecessary deaths under anesthetics. No general or local anesthetic should be administered by any but a qualified practitioner save under the most exceptional circumstances, which should be duly reported to some recognized official authority. Full details should be reported by the anesthetist of all administrations of anesthetics, whether in hospital or private practice. A register of all administrations of anesthetics should be kept in all medical charities, poor-law infirmaries and other institutions. So far as possible, skilled anesthetists should be appointed to all hospitals and infirmaries and resident anesthetists should be provided in the large institutions. When administration of an anesthetic is entrusted to a junior qualified man he should be supervised by a skilled anesthetist except when he can produce a certificate of special skill and experience as an administrator or when a skilled anesthetist is not available. Notification should be made to the coroner of all deaths at any stage of general anesthesia. Coroners should be required to hold a public inquiry into all cases of death during anesthesia. A royal commission with advisory powers might, with advantage, be appointed to inquire into the present facts of deaths under anesthesia.

Housing of the Working Class: The Bourneville Lesson

The problem of the housing of the working class has for many years exercised politicians, sanitarians and philanthropists. The small, ill-ventilated, poorly-lighted rooms in which the workers are often crowded in the slums of great cities are a fruitful cause of tuberculosis and other diseases. This evil has greatly developed in the last half century with the "urbanization" of population, which the conversion of this country from an agricultural into a manufacturing one has involved. A movement to check this evil has been begun by the construction of "garden cities." In some suitable part of the country a city is planned out on model lines, allowing plenty of open space and gardens. The object is that such cities should be self-contained, that factories should be transferred to them from the great cities, so that the inhabitants should both work and live in them under ideal conditions. Perhaps the most remarkable example of the garden city is the village of Bourneville, four miles from Birmingham, founded by Mr. George Cadbury, the cocoa manufacturer, as an experiment, in order to try the effect of rural surroundings, ample air space and sunshine on factory and similar workers. The idea on which the village is based is that there shall be no overcrowding of the houses on the land, that each house shall have a garden, that there shall be numerous open spaces and playgrounds, and that there shall be free course on all sides of fresh air and sunshine. The cottages are semi-detached or in blocks of four, each standing on a plot of land averaging 500 square yards in area. There are front gardens gay with flowers and back gardens rich with fruit and vegetables. There are parks, playgrounds and open spaces. The timber has been preserved wherever possible and the roads are tree planted. The rents range from a minimum of $1 a week. No saloon is permitted in the village. Mr. Cadbury handed over the estate and village to trustees, surrendering all interest in the capital value. The deed of the foundation provides for carrying on the scheme in accordance with the ideals of the donor, and enacts that the revenue, after providing for maintenance and repairs shall be employed in the erection of houses and the purchase of land for extending the scheme. Building is steadily going on out of the surplus revenue. At present the area of the estate is 525 acres and there are 700 houses in the village, with a population of 3,000. The demand for cottages is so great that it is impossible to keep pace with it. The result of this experiment on the health of the inhabitants is of great interest. For the five years ending 1907 the death rate per 1,000 inhabitants was 6.3, while that for the district in which Bourneville is situated was 10.3, and for the city of Birmingham 15.4. The infantile mortality per 1,000 live births was 80.2, while that for the district was 100.2, and for Birmingham 131.4. During the last year some interesting measurements were made to ascertain how Bourneville school children compare with children of the same age living under the usual slum conditions in Birmingham. At the age of 6, boys in Bourneville weighed on an average 45 pounds and measured 44.1 inches, against 39.4 pounds and 41.9 inches in Birmingham; at 8 they weighed 52.9 pounds and measured 48.3 inches, against 47.8 pounds and 46.2 inches; at 10, 61.6 pounds and 51.9 inches, against 56.1 pounds and 49.6 inches; at 12, 71.1 pounds and 54.8 inches, against 63.2 pounds and 52.3 inches.

Cancer Research

At the annual meeting of the court of governors of the Middlesex Hospital (the only general hospital in London which has special wards for the reception of patients suffering from cancer, and also cancer research laboratories), Dr. Lazarus Barlow described the work done in the laboratories since their opening in 1900. Here ten highly qualified pathologists are constantly working at cancer research at a cost of $12,500 per annum. The examination of the records of 8,000 cases of cancer of which the hospital had notes showed that there was no evidence that the disease was inherited. From the point of view of life assurance and of allaying a general fear, this was of great utility. Why cancer started at all, why it was sometimes located at one spot, sometimes widely disseminated throughout the body, why it killed, how it killed, were questions to which no positive answer had yet been given.

PARIS LETTER

(From Our Regular Correspondent)

Paris, March 2, 1909.

Epidemics in the Army

For some time an epidemic of typhoid fever has decimated the garrison of Cherbourg; the detailed inquiry undertaken by the military authorities gives no results; the water of the barracks can not be incriminated, for the sterilizers are working perfectly. In the presence of such a state of affairs the war department has ordered all the cafés and saloons of the town and suburbs, where drinks mixed with impure water might aid in the propagation of the disease, to be closed to the troops, both soldiers and sailors. Although this measure is amply justified, the liquor sellers protest none the less energetically against it, and, strange to say, the municipality of Cherbourg has informed them that the police are to take no action against the vendors who continue to serve the soldiers and marines. The préfet maritime, in his capacity as governor of Cherbourg, may confine the troops to barracks and the marines on board ship. The superior commission of military hygiene and epidemiology, the president of which is Dr. Roux, director of the Pasteur Institute, and the superior council of waters in the war department, met on March 1 to discuss the epidemics reported from several garrisons. The two commissions unanimously approved the measure taken by the war department at Cherbourg. A subcommittee was appointed to meet at Cherbourg and study the means of overcoming the epidemic, the question of the water supply and the sanitary condition of Cherbourg in general.

An epidemic of cerebrospinal meningitis exists in the garrison of Evreux, the capital of the department of Eure.

Application of the Law for Old Age and Infirmity Pensions

From the inquiry recently instituted by the minister of the interior it transpires that on the 31st of December last the number of aged, infirm and incurables admitted to the benefit of the law of July 14, 1905, regarding compulsory relief (*assistance obligatoire*) had risen to 534.965, of whom 49.589 are cared for in public institutions and 485.376 are given assistance at their homes. Among those receiving home relief, about 60 per cent. were at least 70 years of age, while 40 per cent. were admitted by reason, not of their age, but of infirmity. It is interesting to learn in what ratio the number of those receiving home relief has increased. The two preceding inquiries were made on March 31, 1908, and Sept. 30, 1908. On the 31st of March the number was 406.503, and on the 30th of September it was 470.349, which gives for the half year an increase of about 64,000, while for the last three months of 1908 the increase has been only about 15,000. There is, therefore, a notable falling off in the increase of the number of beneficiaries, which will doubtless be still further marked in the first three months of 1909. It will be yet further accentuated as the prefects, according to formal instructions from the premier, have instituted a local and general control to prevent abuses. There is consequently reason to suppose that towards the end of 1909 the law regarding compulsory relief will have attained a state of equilibrium, the number of new admissions being henceforth almost exactly balanced by the number of deaths.

A Monument to E. J. Marey

The International Association of the Marey Institute has taken the initiative in opening a subscription to erect at the Marey Institute a monument to the great physiologist, the inventor of the graphic method, who, by his researches on the flight of birds, was the forerunner of aerial navigation. A great deal of support has already been received from abroad. In France a committee has been formed under the honorary presidency of the minister of education with Professor Chauveau as actual president, to make an appeal to the old friends, pupils and admirers of Marey, and to collect subscriptions to assure to the lamented savant a testimony of esteem and regard worthy of his works, which have added luster to French science.

Apprenticing of French Hospital Nurses in London

As I mentioned in a previous letter, a training school for nurses has been recently organized at the Salpêtrière Hospital. In the course of a recent visit to London, M. Mesureur, directors of the *Assistance Publique*, made arrangements with the authorities of St. Bartholomew's Hospital to send to this institution a certain number of pupil nurses from the Salpêtrière training school to learn English methods of hospital nursing.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, Feb. 26, 1909.

The Chair of Hygiene at Königsberg

It is reported that Prof. Kruse, of Bonn, is to succeed Pfeiffer. Kruse is a pupil of Prof. Finkler and has made a reputation by a number of excellent works on bacteriology.

Haeckel

A few days ago Haeckel, who recently celebrated his seventy-fifth birthday, gave his final lecture at the close of his life work as a teacher. Although the noted scientist will remain connected with the Jena university, he will not lecture any more. Unfortunately his retirement has not been entirely harmonious, and he who has come off successful in many battles in the past has become involved in a strife in which he is in the wrong. In an article which appeared about two years ago, entitled "The Problem of Man and the Noble Animals of Linné ("*Das Menschenproblem und die Herrentiere von Linné*"), and in other places he has given illustrations of embryos, to prove the theory of descent, and a zoologist, Dr. Brass, has publicly accused him of falsifying some of these pictures. Haeckel answered in a Berlin newspaper that a small part of his numerous pictures of embryos had indeed been artificially changed. This had been necessary with some pictures as the existing material for observation was insufficient, so that it was necessary, in order to exhibit a consistent chain of development, to fill up the gaps with hypotheses and to construct the missing link by synthesis from comparison. Haeckel expressed the opinion that a large majority of all the embryologic figures which are found in the best text-books deserve equally this charge of having been tampered with. Naturally a greater sensation was created by this admission than by the charge made by Dr. Brass, and the numerous opponents of Haeckel eagerly seized the opportunity to attack him. In consequence of this, the *Deutsche medizinische Wochenschrift* requested Keibel, professor of anatomy at Freiburg, to give his opinion on the matter, and Keibel condemns the method and assumptions of Haeckel. He is compelled to characterize Haeckel's action as thoroughly unscientific and he contends that nothing like this is found in good text-books. He does not like to apply the term "falsifying" to these artificial changes, as in his opinion Haeckel un*doubtedly acted in good faith.* The investigations of Keibel had also the additional interest that they showed that the accuser, Dr. Brass, had not always been exactly careful with scientific truth, and that errors could be shown in pictures contained in his writings, and that further even his scientific statements are in part erroneous. Keibel concludes his important article with the opinion: "Haeckel and Brass both misconstrue in the same way the character and range of scientific investigation. Science has nothing to say about value and purpose; her business is to establish facts and the causal connection between facts. She assumes the value of truth, without being able to demonstrate it by her methods." We are interested to learn whether the two scientists thus condemned will reply to this impressive criticism and, if so, what their answer will be.

The Secretary of State and the Medical Profession

On the occasion of a debate in the Reichstag, the secretary of state, von Bethmann-Hollweg, discussed the principles of the bill for reforming insurance legislation, which has been for a long time in preparation and is finally ready for adoption. In connection with this he commented on the conflicts of physicians with the *Krankenkassen* and especially on the trouble at Cologne. His remarks have raised a storm of indignation throughout the entire medical profession. The secretary accused physicians of exaggerating the principle of combination and set forth the damage which might in this way ensue to the suffering public. The boycotting of a patient or of a dying person, to which such a conflict might lead, would be a return to the worst unsocial conditions. In his opinion the majority of German physicians would not approve of such practices, but they would be held together by the iron clamp of organized union under the threat of proceedings in the tribunal of honor. The entire medical press has given clear expression to its disapproval of these remarks which undoubtedly indicate an insufficient knowledge of the matter on the part of the secretary of state, and which, especially in the present state of the conflict at Cologne, were very inappropriate. Many counter-arguments have been presented in the Reichstag, especially by medical members, and the president of the *Leipziger Verband* has written an open letter in which he points out the mistaken judgment of the secretary of state and shows how the entire struggle of the physicians was brought on by the management of the insurance societies. The secretary of state has now published an answer to this open letter in the official *Norddeutsche Allgemeine Zeitung* which is written in a very conciliatory tone and indicates that the secretary of state is convinced of the impropriety of his remarks. He assures us that the imperial government will give the medical profession the greatest possible protection. He appreciates the share that German physicians must have in this solution of social problems, and the services which they have performed in this respect. He admits that now as heretofore the German medical profession recognizes as the principal object of its calling the free application of science to the benefit of suffering mankind. But he believes that physicians have developed a keenness in promoting their material interests, which have been brought more into question than hitherto in consequence of the industrial legislation, and that this obscures the ideal conception of their profession. He hopes that in this respect a change for the better will set in. With reference to the proposed reform he expresses the hope that it will be possible to harmonize the consideration of professional and economic necessities with the ideal high position of the medical profession. Let us hope that the legislature will succeed in eliminating the evils that the medical profession has had to suffer through the industrial insurance legislation which failed to take their interests sufficiently into account.

The Spread of Cerebrospinal Meningitis in Prussia

During 1907, 2,551 cases of epidemic cerebrospinal meningitis occurred in Prussia, affecting especially the provinces of Posen, Silesia, the Rhine provinces, particularly Westphalia. The largest number of cases occurred in March, April and May, while in autumn the fewest occurred. Of those attacked 79.7 per cent. were under 15 years of age, and 48.4 per cent. were children under 5 years; 63 per cent. died and 52.2 per cent. of the 1,266 deaths occurred in the first week of the disease.

Pharmacology

OLEOZONE—OXYDASE—COWLES INSTITUTE

The Passing of Hydrocine and the Commercial Possibilities of the Sugar "Cure" for Tuberculosis

A little over a year ago[1] we gave space to a fake cure for tuberculosis called Hydrocine, a product promoted by a Dr. C. S. Roberts. Hydrocine was advertised to be a "hyper-oxidized hydro-carbon," whatever that may be. An imposing analytic report of the product by a New York chemist was given, which, as we said at the time, read more like "a testimonial prepared at the request of the manufacturer."

HYDROCINE NINETY-FIVE PER CENT. SUGAR

As will be remembered, when examined in the laboratory of the American Medical Association, this "hyper-oxidized hydro-carbon" was found to be 95 per cent. *sugar!* To quote from the Association's laboratory report: "Each 29.5 grain Hydrocine tablet contains 28 grains of cane sugar and small quantities of volatile oils and a trace of pancreatin."

Hydrocine is no more, but the commercial possibilities in sugar as a therapeutic agent are still recognized. Phoenix-like, there have arisen from the ashes of Hydrocine two other "hyper-oxidized hydro-carbons"—Oxydase and Oleozone. In fact, there seems to be at present no fewer than three concerns which are "curing" tuberculosis by means of sugar *plus* various incidentals.

HYDROCINE—OLEOZONE—OXYDASE

Before Dr. Roberts "gave up a practice that was yielding . . . [him] an income of over $10,000.00 a year" to sell odoriferous sugar at $8.00 a pound, Hydrocine seems to have been manufactured by a Mr. E. C. Getsinger. It now seems that Getsinger and Roberts have parted company, for the country is being flooded with letters from Roberts in which he says:

> "In view of the fact that the party [Getsinger?] who formerly manufactured the old product for me . . . is now attempting to market it himself, I wish to avoid the danger arising from anyone confusing it with my improved treatment. For this reason I have adopted a new name, Oleozone (oil and oxygen), and under this title my new and vastly improved product will be marketed."

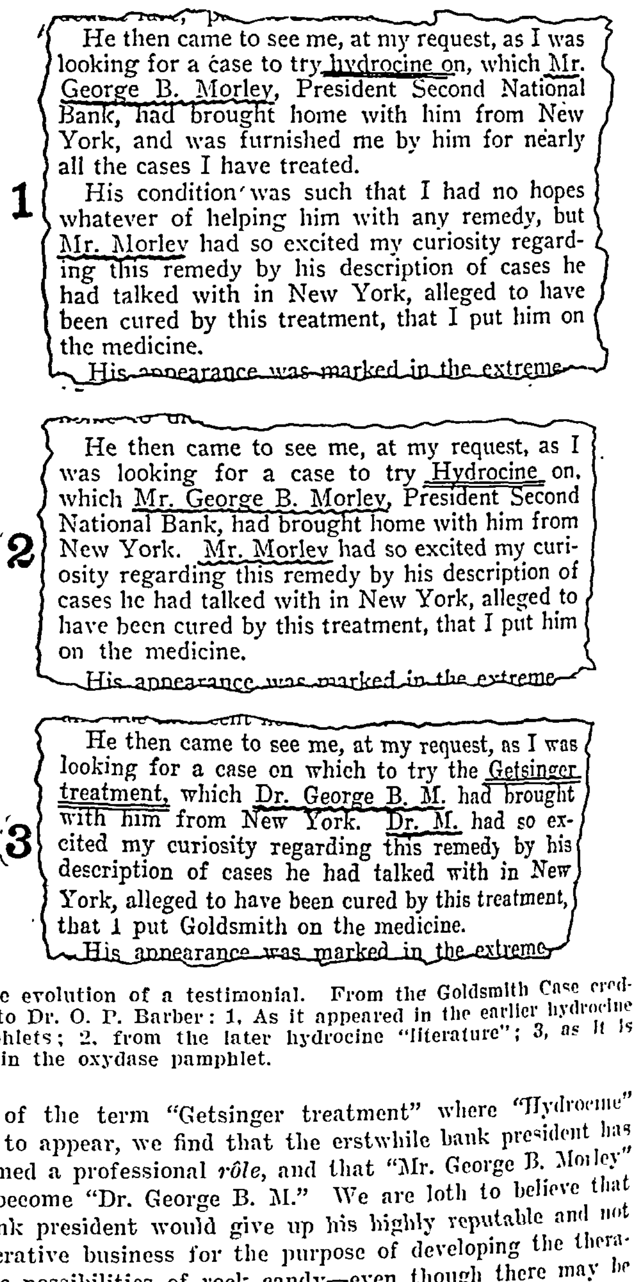
On the other hand Mr. Getsinger, who signs himself proprietor of the "Oxydase Company," and who, apparently, *is* the Oxydase Company, has attempted to checkmate Dr. Rob-
tu[illegible] "urb[illegible]f post-cards and other advertising matter.
version of this cour
facturing one has in
has been begun by ame of the compound is 'oxydized hydro-carbon'
some suitable part [illegible]ned 'Hydrocine.' In the present perfected form
model lines, allowing profession under the name 'Oxydase'."
object is that such citi no mistake, the Oxydase Company sends
tories should be transfer
that the inhabitants shoul which begins:
ideal conditions. Perhaps nforms you that Dr. C. S. Roberts of
the garden city is the illage [illegible]es agent for Hydrocine."
Birmingham, founded by Mr. Ge

BRINGING TESTIMONIALS UP TO DATE

The advertising "literature," including testimonials of the apparently defunct Hydrocine Company, seems to have reverted to Mr. Getsinger, as the Oxydase Company's pamphlets are practically a re-hash of the old Hydrocine matter. In this connection, it is interesting to note how testimonials are overworked. One of the most imposing testimonials in the old Hydrocine pamphlet was that accredited to Dr. O. P. Barber of Saginaw, Mich. In this testimonial, Dr. Barber was quoted as saying:

> "I was looking for a case to try Hydrocine on, which Mr. George B. Morley, President Second National Bank, had brought home with him from New York, and was furnished me by him for nearly all the cases I have treated."

We called attention in our previous article to the somewhat unusual course of a physician administering a remedy of whose virtues he learned from the layman who furnished it. This objection can not be raised, however, to this same testimonial of Dr. Barber's as it now appears in the Oxydase "literature." While it is used practically verbatim, except for the substitution of the term "Getsinger treatment" where "Hydrocine" used to appear, we find that the erstwhile bank president has assumed a professional *rôle*, and that "Mr. George B. Morley" has become "Dr. George B. M." We are loth to believe that a bank president would give up his highly reputable and not unlucrative business for the purpose of developing the therapeutic possibilities of rock candy—even though there may be money in it. Knowing what we do of testimonials and their value, it seems more reasonable to suppose that the transformation of the banker into a physician is merely an artistic touch on the part of those who adapted the Hydrocine advertisements to the Oxydase product.



1

He then came to see me, at my request, as I was looking for a case to try hydrocine on, which Mr. George B. Morley, President Second National Bank, had brought home with him from New York, and was furnished me by him for nearly all the cases I have treated.

His condition was such that I had no hopes whatever of helping him with any remedy, but Mr. Morley had so excited my curiosity regarding this remedy by his description of cases he had talked with in New York, alleged to have been cured by this treatment, that I put him on the medicine.

His appearance was marked in the extreme

2

He then came to see me, at my request, as I was looking for a case to try Hydrocine on, which Mr. George B. Morley, President Second National Bank, had brought home with him from New York. Mr. Morley had so excited my curiosity regarding this remedy by his description of cases he had talked with in New York, alleged to have been cured by this treatment, that I put him on the medicine.

His appearance was marked in the extreme

3

He then came to see me, at my request, as I was looking for a case on which to try the Getsinger treatment, which Dr. George B. M. had brought with him from New York. Dr. M. had so excited my curiosity regarding this remedy by his description of cases he had talked with in New York, alleged to have been cured by this treatment, that I put Goldsmith on the medicine.

His appearance was marked in the extreme

The evolution of a testimonial. From the Goldsmith Case credited to Dr. O. P. Barber: 1, As it appeared in the earlier hydrocine pamphlets; 2, from the later hydrocine "literature"; 3, as it is now in the oxydase pamphlet.

THE NEW CHEMISTRY

Much stress is laid by the Oxydase Company on the statement that while their tablet is super-oxidized, the substitute tablet [Oleozone?] “is not oxidized” To prove (?) their point, the Oxydase Company says:

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[1] 'g. 17, 1907, and Feb. 15, 1908.

> “Place the tablet between tweezers, ignite with a match, then observe the *oxygen blue flame* The sputtering is the *explosion of small quantities of Oxygen* as it is rapidly liberated There is no smoke, *nor odor*, proving complete combustion” [Italics ours.—Ed]

This test, both from theoretical and practical considerations, deserves notice Theoretically, because oxygen being, in air, an incombustible gas, can neither explode nor burn with a blue or any other kind of flame; practically, because, the statement to the contrary notwithstanding, there *was* some smoke and a distinct odor of burning sugar when a simple Oxydase tablet was ignited.

The “oxygenating” power of Oxydase and its varied therapeutic indications are set forth in the following weirdly constructed sentence:

> “With 20 remedial impulses in septemia within ten hours, or longer on the same dosage, is a formidable weapon in the hands of a physician—in cases of Typhoid Fever, and other sudden invasions of disease, in Croup, Pneumonia, Diphtheria, Asthma, Abscesses, Bronchitis, etc , Oxydase will give you surprising results”

OLEOZONE “STRICTLY ETHICAL”

In calling attention to his “improved Hydrocine” Dr. Roberts emphasizes that he is “distributing this remedy along strictly ethical lines only.” In fact, he “will not even place it in drug stores, unless to accommodate a physician at his request.” This course is somewhat of a departure from that which he followed in exploiting Hydrocine.

THE “COWLES INSTITUTE”

But Dr. Roberts and Mr Getsinger are apparently not the only ones who dispense “oxygenated products.” We have received letters from various parts of the country inquiring about a New York concern calling itself the “Cowles Institute” A pamphlet sent out by this “institute” has printed on the cover a red double cross—a misuse of the international emblem of the campaign against tuberculosis that is as unwarranted as it should be illegal. On the title page we read:

> “Established for the treatment of tuberculosis in its various forms by entirely new and special methods of medication complying with the highest ethical standards, by which full recoveries in uncomplicated cases of tuberculosis are generally made in from six to nine months without the necessity of changing climate or enforcing severe or rigid hygienic dietetic rules ”

A SUBTLE REMEDY

The “entirely new and special methods of medication” is “by means of an easily digested specially oxygenated product that by regular process of assimilation conveys Atomic Oxygen in proper combination direct to the circulation. . .” This wonderful remedy is far too subtle a product to distribute indiscriminately to the medical profession, much as the Cowles Institute would like to do so,

> “but owing to the necessity of keeping it under fixed conditions of light and temperature and of using it within a very limited period of time in order to obtain the proper results, it is manifestly impossible to do this”

We find, however, that the “treatment” is not to be entirely “cornered,” as letters are sent to physicians stating that it is the desire of the “institute” to place the “oxygenated product” in the “hands of at least one competent physician in every community of consequence” To those physicians who have a tuberculous patient under their care, they would “be glad to send a sufficient quantity to demonstrate its value without any expense except express charges” As to what may be expected from this “treatment,” the modest claim is made:

> “. . . practically 90 per cent. of the cases we take in the first and second stages of tuberculosis make a complete and apparently permanent recovery”

We have, then, apparently three concerns “curing” tuberculosis by means of sugar and essential oils, two of them operated by laymen The similarity of the claims made, and of the methods pursued, by this trio of “consumption cures” is best shown by the quotations we have taken from the “literature” and correspondence of the three concerns and arranged in parallel columns.

We offer no apology for giving space to what may, at first thought, appear to be an insignificant matter. Reading between the lines in some of the letters of enquiry we have received regarding these “cures,” there seems little doubt that at least some of these physicians have been “almost persuaded” to use them There are now at least three concerns, where there was originally only one, engaged in exploiting “sugar and essential oils” as a cure for tuberculosis This in itself proves that physicians are using these “cures” and making them commercially profitable, for so far as we know, they are advertised only to the medical profession

COMPARISON OF CLAIMS OF THE TRIO OF CONSUMPTION “CURES”

COWLES TREATMENT	GETSINGER TREATMENT (OXYDASE)	ROBERTS TREATMENT (OLEOZONE)
“. . . composed of a base of *saccharum* and two enzymes one gastric and the other *pancreatic* To this is added the *highly oxygenated* active principal [sic] of the essential oils of *thymus*, *terebinthina* and eucalyptus with chlorophyl and aromatics”	“Oxydase tablets contain Oils of Wintergreen, *Cinnamon*, *Peppermint*, *Cornin* Sassafras, *Thyme* and *Turpentine* and *Sugar*, all *highly oxidized*”	“Oleozone is prepared from the oxygenated principles of the oil of *cassia*, cornin *peppermint*, spruce, myrtle, myrrh, marrubium *turpentine* and *thymol* . . combined with rock candy, *sugar* and *pancreatin* ”
“. . . a safe, feasible method of rapidly furnishing the blood with the necessary oxygen properly combined . .”	“Oxydase is . . . a prolific oxygenating agent in medicine ”	“It purveys a constant supply of oxygen to the blood . .”
“It is *non toxic*. . .”	“. . . no *toxic* dose possible .”	“. . . a harmless compound . . positively not injurious from prolonged use”
“Instruct patient to *avoid taking water within fifteen minutes before or after taking* a tablet, as water in some cases, combined with the oils in the tablets, produce slight nausea”	“Have patients drink milk at any time, *but not so with water*, which decomposes the tablet . . . causing cumulation and nausea”	“*Drink no water within fifteen minutes before or after taking* the tablets, as water disturbs the oils in the tablet”
“. . . during the first week of treatment . . the sputum may be *tinged with blood* and the patient complain of slight *shooting pains* or *tingling sensations* throughout the infected area ”	“Twenty days thereafter dull, *twinging pains* over infiltrated *areas*; *tinges of blood in sputum*”	“Soon *twinges of pain* and great soreness in the chest may be noticed, with perhaps *tinges of blood in the sputum*”
“. . . full recoveries in uncomplicated cases of tuberculosis are generally made in from *six to nine months* . .”	“Course of treatment lasts from *six to twelve weeks*”	“. . . this new treatment requires only *six to sixteen weeks* to perfect a permanent cure .”
“. . . the oxygenated products employed in our treatment . . . are unobtainable elsewhere . Neither are they similar in characteristics or action to any other so-called oxygenated products that may be on the market”	“There are substitute hydro carbon treatments now being exploited which are not an oxidized product”	“. . . the party who formerly manufactured the old product for me . . . is now attempting to market it himself I wish to avoid the danger arising from anyone confusing it with my improved treatment”
“In Pneumonia we find this tablet undoubtedly a specific for this disease”	“In . . . Pneumonia . . . Oxydase will give you surprising results”	“In cases of acute Pneumonia it will cure them so quick that it will surprise you”

Correspondence

Benzoate of Soda in Foods

To the Editor:—The position which The Journal has taken on the benzoate of soda question should be commended by every advocate of pure food and in the interests of the public. The letter in last week's issue from Dr. E. E. Smith puts the question perfectly clear. It is obvious that the only excuse for the use of the benzoate is to permit of careless handling of the raw material. That it is entirely unnecessary for the preservation of catsup every housewife knows. Those manufacturers who use no preservative should be so patronized by the public, that their competitors who use the drug should either be driven out of business or forced to mend their ways.

There is one point in connection with the finding of the referee board which I have not seen brought out and which, I think, should be clearly stated. It has to deal with the decision of the board that benzoate is harmless. I hesitate to express an opinion divergent from that of my colleagues who are men of such high standing and who have made a special study of the problem, but I can not help thinking that they have done an injury to the cause of pure food. Their decision should be, and it was undoubtedly their intention to make it, in strict accord with the facts. That is, the conclusion should not go one particle beyond the facts. Unfortunately, however, the conclusions as stated seem not to have been confined to the facts investigated. They appear, judging from the published report, to have unintentionally fallen into the error of drawing positive conclusions from negative evidence, always a most dangerous proceeding and, in investigations of this character, doubly dangerous. Positive results in such investigations are clear cut and certain. That is, if derangements of health are apparent and clearly due to the drug, there is no doubt about the conclusions. But where the results are negative, as in this case they are reported to be, the conclusions should have been, it seems to me, simply the statement of this fact, for that is all that they observed. One never knows whether, in the case of a negative result, the harm was there and overlooked, or whether it was not there. It is a fact that at the present time our methods of investigation of the internal processes of the body are so crude, we know so little of the internal workings of the machine, that we can detect none but gross changes in it. The examination of the urine only gives the end products of metabolism; it does not show us the finer changes in the body at all. When we put a drug into the body, if it produces a large change it can be seen, but if the change is small it can not be detected. We are in the same position, in this regard, that astronomers were before they had telescopes. If they examined Jupiter, they saw no moons; if, therefore, they concluded that there were no moons, they would have been in error. It appears to me that something very like this is what the referee board may have done in drawing a positive conclusion from negative evidence. It may be, of course, that the board really has some other evidence than that, a summary of which has been given to the country. But on the face of their statement of the facts and the conclusions they have drawn from these facts, they have, I think, laid themselves open to serious criticism for, not having detected derangements of health, they have concluded that there were none, and not only that there were none in such individuals as those examined, but that there would be none, whatever the state of health or age of the individual taking the germicide.

Investigations of this kind, confined as they are to healthy men in the prime of life, are of little use in determining whether a bacterial poison, or germicide, such as sodium benzoate, is or is not harmful to the community made up of infants, children invalids and the aged, as well as the young and vigorous. Every one knows the difference between the sensitiveness of the stomach mucosa in children and adults. The conclusions of the referee board, if drawn from experiments on healthy young men only, should have been stated to apply only to such a class. It may be that the board have experimented also on infants, children and on those wavering between life and death and have found that the addition of sodium benzoate is harmless, but if they have tried such experiments they have not said so in their summary. If they have not tried such experiments, what excuse can they offer for having extended to all members of a community conclusions which were the result of an investigation of a selected group *only*? As the referee board is composed of eminent scientific men, I should conclude that they have tried such experiments and said nothing about them, were it not that they state that the observations were made on healthy young men.

Whatever the final decision of this question of the effect on health of sodium benzoate, wise men will continue to regard germicides, such as sodium benzoate, as highly suspicious constituents of our foods and, as far as possible, purchase foods which are preserved in a cleanly and healthy manner, free from such germicides. We should also express in some way to Dr. Wiley our appreciation of the splendid fight he has made in behalf of all the people against the adulterers and poisoners of our food supplies.

Albert P. Mathews, Chicago.

The Tariff and Medicine

To the Editor:—Now that Congress is considering a partial revision of the tariff with a view of reducing some of our excessive and burdensome duties, I think that it would be an excellent time for medical men to get together and show how unjustly their interests are affected by the present tariff schedules. Medicine being the only cosmopolitan industry in the world, it continually happens that articles necessary to the prosecution of medical research are made better in one country than in another, and for this reason it often becomes necessary to import in considerable quantities into other countries instruments or appliances made under the supervision of the inventor. I have found the tariff on radium excessively burdensome, and I am sure that it is a serious hindrance to the cause of original investigation in this country in the field of therapeutics. Physicians in both Germany and England have a far better opportunity than we to determine how far radium will effectually cure malignant diseases on the surface of the body. Few medical men are rich enough to pay hundreds of dollars in tariff to the Government every time they purchase enough radium to cover the head of a pin (ten milligrams).

Again, in the case of the reflecting condensers, now so necessary for the study of living bacteria, with the dark-ground illumination, the enormous tariff simply doubles the price of these simple instruments, so that the electric arc lamp (one of the essentials) which can be purchased in Germany for $8.00, here costs $16.00.

I wish a vigorous protest might be made against this disastrous policy of our government, which is both stupid and suicidal, hurting all the sick and the prospective sick people of our country by taxing medical enterprise.

Howard A. Kelly, Baltimore.

In Behalf of Institutions for Crippled Children

To the Editor:—For the purpose of publishing complete statistics of the institutions in the United States of America devoted wholly or in part to the care of mentally sound crippled children, the object of such institutions being, surgical and medical treatment, education, manual and industrial training, or any one of these features, I earnestly solicit information from persons associated with such institutions or having knowledge or addresses of same, on the receipt of which blanks indicating the information desired will be forwarded. The collected statistics will be published in America and abroad, therefore it is desirous to give America due credit for the efforts being made to benefit and uplift helpless crippled children.

The following is an outline of the information desired: (1) Name and address of institution; (2) date of establishment of institution; (3) how supported; (4) number of pupils; (5) day pupils; (6) resident pupils; (7) provision for surgical care; (8) educational courses; (9) manual training with account of product; (10) special feature and aim of institution; (11) age at which children are admitted; (12) age at which children are discharged; (13) average length of stay in the institution; (14) list of medical and surgical staff; (15) provision made for children after leaving institution.

William Jackson Merrill, M.D.

1819 Chestnut Street, Philadelphia.

Miscellany

An Idle Challenge from an Antivivisectionist.—We quote the following from the New York *Evening Sun:*

"This characteristic communication comes to us from the president of the Antivivisectionist Society:

"*To the Editor:*—Regarding your editorial attack in the *Evening Sun* of January 27 on a leaflet issued by this society, I would say that I should be glad to have you attempt at our mass meeting (to be held at Carnegie Lyceum, February 3, 8 p. m.) to sustain your assertions against its accuracy. Miss Lind-af-Hageby will be glad to show you that you are in great error. Diana Belais, New York.

"We have received a similar letter from a woman who says she wrote the leaflet. She shall be nameless. It is typical of the light-hearted irresponsibility of the antivivisectionists that neither the woman who is responsible for the publication of the leaflet nor the woman who boasts of having penned it offers the least defense of her part in the matter. Instead we are told that a certain young woman from England 'will be very pleased to meet any one in debate.' This young woman, we may remark, was joint author of a scandalous publication entitled 'The Shambles of Science,' which the publisher was compelled to withdraw from circulation several years ago, with a public expression of 'sincere regret for having printed and published the book in question.' We have no desire to enter into any controversy with this woman, who confesses that she has some difficulty in finding opponents at debate in the country of her adoption—a circumstance which does not astonish us in the least.

"Mrs. Belais boldly proclaimed the other day that no 'unjustified assumptions or allegations' were published by her precious society. We picked up a leaflet and extracted this single passage: 'Pasteur and his followers increased a very rare disease called rabies, and are making fortunes out of the antirabic virus.' To call this an 'unjustified assumption' is to state the case mildly. It is nothing less than an infamous and malicious lie. And we maintain that it is a disgusting spectacle to see so great a benefactor of the human race as Pasteur treated in this frivolous manner by a parcel of unscrupulous women."

Care of Static Machines.—Dr. C. S. Minnich, Palmer, Neb., writes that any of the modern makes of static machines can be depended on if the case containing the plates is kept dry and free from dust. Many of the cases are made with loosely fitting doors or at best the doors have a packing of felt or cloth only, often no packing or gasket at all about them. The case can, and should be made so tight that only changes of temperature and of barometric pressure will affect the contained air. The physician should see that the glass panes in the top and sides are as tightly in place as putty and wooden strips will make them. Often the putty and strips will be found to be loose and the glass shaky. Cracked glass in the case must be replaced with whole pieces. A few yards of soft "nurser" tubing may be fastened with small tacks to the frame to form a gasket for the doors to be screwed up against so that they will fit practically airtight. Felt or cloth can not be depended on for this purpose like a rubber tube and even the rubber tube must be replaced occasionally as the ozone and nitrous fumes in the case soon harden and crack it. A large earthen or glass dish may be placed in each side of the case and one partly filled with hard pieces of quicklime and a cloth put over it to keep dust from lime from flying; in the other dish are put two or three pounds of fused calcium chlorid. The case is then ready to be closed and should be kept closed, except when it is really necessary to open it. If the plates are dusty they should be cleaned with a soft woolen cloth wrapped about a lath, the cloth being held against the plate as it is slowly revolved. When lime is used in the case it should be changed as soon as it begins to air-slake and bulge up under the cloth. There is no particular advantage in quicklime over calcium chlorid, except that it is very cheap and always available. When the calcium chlorid begins to get moist it should be taken out and baked in a hot oven until dry and then should be put back in the case while it is still warm (not hot). In case the varnish is scaling off the plates, they should be taken out of the case and well cleaned with common lye and water, well washed and dried, given a coat of good transparent coach varnish, and dried in the sun, out of the dust, before being replaced in case. Dr. Minnich has an old machine of standard make that was badly broken in transit. Two of the revolving plates were broken and were replaced by others cut from common, double strength, window glass. As the varnish was scaling off all the revolving plates in spots, they were all cleaned with lye and all revarnished with good coach varnish (two coats) before being replaced in the case. Since the machine was thus put in order it has never failed to give a good current in any kind of weather, and seems as sure to work as any common dynamo; and it is only a 27-inch, 16-plate machine. It is a common experience to get a twelve-inch spark from it.

The Present Position of the Theory of Autoregeneration of Nerves.—Dr. J. Gordon Wilson discusses (*Anat. Rec.*, January, 1909, p. 27) the various theories of the regeneration of nerves after section. Three distinct views are held. The first theory is that the regeneration is altogether from a central source; that is, that the axis cylinder grows out from a central or nutritive cell; and, in connection with it the entire nerve fiber reforms independent of any aid from the degenerated remnant in the peripheral stump. The second is that regeneration of a nerve fiber is entirely peripheral, being renewed from what remains of the old nerve fiber and independent of a central connection. The third view is that the central and the peripheral stumps each play an assisting part in the formation of the new nerve fiber. The term "autoregeneration" is used in a restricted sense. All are agreed that under ordinary circumstances some connection must be made between central and peripheral stumps for a nerve to regain its anatomic and physiologic entirety (a modification to some degree of the third view); that regeneration is preceded by degeneration, the last stage of the latter being essentially a stage of transition into the former; that in adults, separation of the two stumps for a distance of 3 to 5 cm. renders union improbable, if not impossible, and that nerve fibers grow out a greater or less distance from the central stump. Bethe upholds the second view. According to him, in young animals, the peripheral end of a sectioned nerve will regenerate (in three to six months) without any connection with the central nervous system. These peripheral nerves appear normal and respond to stimuli. Such is not the case in adults. Contact with the central stump, however, hastens regeneration. Union is first by the connective tissue sheath. After section, nerve fibrils from both central and peripheral stumps grow out to meet each other. Cajal rather supports the first view. It is maintained that fibrils grow out from the central stump—the stump in connection with the central nervous system; are attracted to the degenerated peripheral stump chemotactically by a substance secreted by the latter; grow down into the sheath of the degenerated nerve, and are partly nourished by its neurolemma. Union does not occur between a motor and a degenerated sensory nerve and vice versa—an argument for specific chemotaxis. From his own work Dr. Wilson thinks that "the brilliant work of Cajal and others is not altogether convincing," and further that in the work of Bethe and his school there remains "ever present the lurking doubt that possibly some source of contamination (connection with other nerves, etc.) had been overlooked."

Shaw and Physicians.—According to the Rochester *Post-Express*, George Bernard Shaw has been investigating the literature of medicine and has found a number of untruths in the pages. Consequently, he gets out his supply of epigrams and tilts quixotically at the windmills of error and deceit. He laughs at the disciples of Esculapius, he rails at the followers of Hippocrates, he sneers at the wonders of modern surgery, and belittles the advance that has been made in the practice of medicine. He charges that the modern doctor often performs serious operations, which are not necessary, "simply because they are fashionable," and holds that the physician who "sells his cures by making out a bill for them makes himself as abhorrent as a tradesman." In other words, the doctor is a swindler because his patients are fools, and instead of belonging to the noblest of the professions he is brother to the short-change artist, the dice-cogger, the green-goods gentleman and the hawker of worthless stocks. In his tirade the epigrammatic G. B. S. is not even amusing, says the *Post-Express*. His absurd detraction of the doctors is not worth the cost of cabling to this country, for it only exhibits Mr. Shaw in an unenviable light. Happily, his words will have little effect, for the great majority of people have a profound respect for the men who practice the profession of medicine.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

POLYGLOT DICTIONARY

To the Editor:—Please give me the name of any Italian-English medical dictionary, or any polyglot of medical terms in the Italian, Spanish, French and German languages. M. S.

ANSWER.—"Terminologia Medica Polyglotta," by Theodore Maxwell (London, J. and A. Churchill, price $3), gives synonyms in seven languages, including Italian, Spanish, French and German. Foster's Medical Dictionary, published by D. Appleton & Co., New York, gives medical terms in English, French, German, Greek and Latin. The National Medical Dictionary, in two volumes, edited by Dr. J. S. Billings, published by Lea & Febiger, Philadelphia, 1890, includes English, French, German, Italian and Latin medical terms in a single alphabetical arrangement. The publishing house of J. A. Barth, Leipsic, issues three small books entitled "Italian for Physicians," "English for Physicians," and "French for Physicians," written in German and the languages of the respective titles, and containing thirty-one conversations between physician and patient on twenty-nine different diseases, lists of medical journals, tables of weights and measures, thermometer readings, etc., and phonetic pronunciation on a German basis. Sample pages will be sent by the publishers on request.

THE INJECTION "CURE" FOR HERNIA

To the Editor:—In the Department of Queries and Minor Notes, January 23, information is requested concerning the injection "cure" for hernia. The following case may help to show its value. Mr. J. had a small inguinal hernia and, seeing the advertisement of a "specialist," telling him to throw away his truss and "be cured without the knife," decided that was what he was looking for. Accordingly he went to St. Louis and put himself in the hands of these "specialists"—there were two of them. They gave him an injection, and apparently with resulting success, but some time after returning to his home he thought he was not quite well and wrote the "doctors" about his condition. They advised him to return and get another treatment. He did so, and states that immediately on receiving the injection severe burning pains ran down his leg. His suffering was intense and he went to a hospital. The "specialists" disappeared. In less than 24 hours the limb was gangrenous and had to be amputated about the middle of the thigh. The solution had been injected into the femoral artery.

O. W. RASH, Owensboro, Ky.

HIGH TEMPERATURE WITH RECOVERY

To the Editor:—Apropos of the letter on this subject in THE JOURNAL, Feb. 27, and your reply, permit me to state that about twelve years ago Dr. A. Jacobi, of New York, reported (Transactions Association of American Physicians) a case in which a temperature of 148 F. was recorded. The case occurred during my interneship at the German Hospital. The patient, a sailor, was admitted for a trivial injury of the cervical spine and developed the high temperature during his stay of several weeks at the hospital.

A. V. MOSCHOWITZ, M.D., New York.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers for the week ending March 13, 1909:

Gilchrist, H. L., major, granted leave of absence for one month.

Stephenson, Wm., lieut.-col., and Banister, W. B., major, relieved from duty in Philippine division; will sail May 15 from Manila, P. I., for San Francisco for orders.

Little, W. L., capt., relieved from duty with Army of Cuban Pacification; will proceed to Fort Adams, R. I., for duty.

Brooke, Roger, capt., relieved from duty at General Hospital, Fort Bayard, N. Mex., and ordered to duty in the Philippines division; granted leave of absence for four months.

Cole, C. L., capt., relieved from duty at Fort Thomas, Ky., and ordered to Whipple Barracks, Ariz., for duty.

Craig, C. E., capt., relieved from duty at Fort Leavenworth, Kan., and ordered to New York City for duty as attending surgeon.

Shillock, Paul, major, relieved from duty at Fort Robinson, Neb., and ordered to Fort Sheridan, Ill., for duty.

Pierson, R. H., capt., relieved from duty at Fort Niagara, N. Y., and ordered to Fort William Henry Harrison, Mont., for duty.

Ford, J. H., major, relieved from duty at Fort William Henry Harrison, Mont., and ordered to Fort Riley, Kan., for duty.

Brown, H. L., capt., relieved from duty at Fort Riley, Kan., and ordered to Key West Barracks, Fla., for duty.

Heysinger, J. D., capt., relieved from duty at Key West Barracks, Fla., and ordered to Fort Ethan Allen, Vt., for duty.

Winn, R. M., major, relieved from duty at Jefferson Barracks, Mo., and ordered to Fort Logan H. Roots, Ark., for duty.

Schmitter, Ferdinand, lieut., relieved from duty at Fort Logan H. Roots, Ark., and ordered to Jefferson Barracks, Mo., for duty.

When, R. J., M. R. C., relieved from duty at Fort Slocum, N. Y., and ordered to proceed to his home and report for further orders; granted leave of absence for 10 days.

Patterson, E. W., M. R. C., relieved from duty at Fort Sam Houston, Texas; will sail April 5 from San Francisco, for duty in the Philippines division.

Graves, L. K., M. R. C., relieved from duty at Whipple Barracks, Ariz., and ordered to his home.

Newton, R. W., M. R. C., relieved from duty at Fort Jay, N. Y., and ordered to Fort Revere, Mass., for duty.

Stockard, J. K., M. R. C., relieved from duty at Fort Revere, Mass., and ordered to his home.

Jackson, T. W., M. R. C., relieved from duty in the Philippines division, and ordered to San Francisco, for further orders.

Chamberlain, G. E., M. R. C., relieved from duty at Fort Walla Walla, Wash., and ordered to his home; granted leave of absence for one month, and then relieved from active duty in the Medical Reserve Corps.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ending March 13, 1909:

DeLancy, C. H., P. A. surgeon, placed on the retired list from March 3, 1909, under the provisions of section 153, Revised Statutes.

Phillips, E. L., acting asst.-surgeon, appointed acting asst.-surgeon from March 2, 1909.

May, H. A., P. A. surgeon, ordered to the *Charleston*.

Ely, C. F., P. A. surgeon, detached from the *Charleston* and ordered to the Naval Station, Olongapo, P. I.

Pickrell, O., surgeon, detached from command of the Naval Hospital, Annapolis, Md., and ordered home to wait orders.

Stoops, R. E., P. A. surgeon, detached from the naval recruiting station, Pittsburg, Pa., and ordered to the *Culgoa*.

Olsen, G. M., asst.-surgeon, detached from the *Culgoa* and ordered to the naval recruiting station, Pittsburg, Pa.

Ransdell, R. C., asst.-surgeon, detached from the *Solace* and ordered to the *Texas*.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended March 10, 1909:

McIntosh, W. P., surgeon, directed to proceed to Cambridge, Md., on special temporary duty.

Foster, M. H., P. A. surgeon, granted 2 days' leave of absence from March 1, 1909, on account of sickness.

McClintic, T. B., P. A. surgeon, granted 2 months' leave of absence en route to the United States.

Salmon, Thomas W., P. A. surgeon, granted 7 days' leave of absence from March 1, 1909.

Krulish, Emil, asst.-surgeon, granted 7 days' leave of absence from March 2, 1909, under paragraph 191, Service Regulations.

Krulish, Emil, asst.-surgeon, granted 10 days' leave of absence from March 9, 1909.

Delgado, J. M., acting asst.-surgeon, granted 1 day's leave of absence, Feb. 21, 1909, under paragraph 210, Service Regulations.

Fabian, Jacob J., acting asst.-surgeon, granted 2 days' leave of absence from Feb. 20, 1909, under paragraph 210, Service Regulations.

Markoe, W. W., acting asst.-surgeon, granted 5 days' extension of annual leave from Jan. 31, 1909, on account of sickness.

Stevenson, J. W., acting asst.-surgeon, granted 4 days' leave of absence from March 9, 1909.

Wakefield, H. C., acting asst.-surgeon, granted 6 days' leave of absence from March 1, 1909, under paragraph 210, Service Regulations.

BOARD CONVENED

Board of medical officers convened to meet at the Marine Hospital, Baltimore, Md., March 5, 1909, for the purpose of conducting a physical examination of four cadet engineers of the U. S. Revenue-Cutter Service. *Detail for the board:* Surgeon W. P. McIntosh, chairman; P. A. Surgeon M. K. Gwyn, recorder.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended March 12, 1909:

SMALLPOX—UNITED STATES

California: Los Angeles, Feb. 13-20, 2 cases; San Francisco, 2 cases.

Illinois: Cairo, Feb. 13-27, 9 cases; Danville, Feb. 21-28, 3 cases; Galesburg, Feb. 20-27, 1 case; Jacksonville, Feb. 4-11, 1 case; Waukegan, Feb. 2-20, 3 cases.

Indiana: Indianapolis, Feb. 21-28, 1 case; Lafayette, Feb. 22-March 1, 1 case.

Kansas: Kansas City, Feb. 20-27, 5 cases.

Kentucky: Lexington, Feb. 20-27, 8 cases; Paducah, 9 cases.

Louisiana: New Orleans, Feb. 20-27, 1 case.

Massachusetts: New Bedford, Feb. 20-27, 1 case.

Missouri: Kansas City, Feb. 20-27, 1 case; St. Louis, 4 cases.

New Jersey: Camden, Feb. 20-27, 1 case.

New Hampshire: Lebanon, Jan. 15-Feb. 23, 2 cases.

New York: Buffalo, Feb. 13-20, 1 case.

North Carolina: Seven counties, Jan. 1-31, 47 cases.

Ohio: Cincinnati, Feb. 19-26, 13 cases.

Tennessee: Knoxville, Feb. 20-27, 1 case; Nashville, 11 cases.

Texas: San Antonio, Feb. 6-27, 9 cases.

Washington: Spokane, Feb. 13-20, 1 case.

Wisconsin: La Crosse, Feb. 20-27, 2 cases; Manitowoc, 6 cases; Milwaukee, Feb. 13-27, 18 cases.

SMALLPOX—INSULAR

Philippine Islands: Manila, Jan. 9-16, 1 case, 1 death.

SMALLPOX—FOREIGN

Arabia: Aden, Jan. 18-Feb. 1, 14 deaths.

British Honduras: Stann Creek, to Feb. 25, 3 cases, 1 death.

Canada: Winnipeg, Feb. 13-20, 1 case.

Chile: Valparaiso, Dec. 12-19, 1 case.

Egypt: Alexandria, Jan. 7-14, 2 deaths; Cairo, Jan. 21-28, 72 cases, 26 deaths.

France: Paris, Jan. 30-Feb. 6, 3 cases.

Great Britain: Bristol, Feb. 6-13, 1 death.

India: Bombay, Jan. 27-Feb. 2, 19 deaths; Madras, Jan. 23-29, 2 cases; Rangoon, Jan. 16-23, 2 cases.

Italy: General, Feb. 7-14, 7 cases, 1 death; Naples, 7 cases.

Java: Batavia, Jan. 9-16, 3 cases.

Mexico: Acapulco, Jan. 23-31, 2 cases; Guadalajara, Feb. 11-18, 1 death; Monterey, Feb. 14-21, 2 deaths.

Newfoundland: St. Johns, Feb. 6-13, 1 case, from vessel.

Portugal: Lisbon, Jan. 20-Feb. 13, 5 cases.

Russia: Odessa, Jan. 30-Feb. 6, 1 case; St. Petersburg, Jan. 23-30, 10 cases, 2 deaths; Warsaw, Dec. 19-Jan. 2, 13 cases.

YELLOW FEVER

Barbados: Feb. 15-16, 9 cases.

Brazil: Manaos, Jan. 23-30, 2 deaths; Para, Jan. 30-Feb. 6, 3 cases.

Ecuador: Guayaquil, Jan. 30-Feb. 6, 7 deaths.

CHOLERA—INSULAR

Philippine Islands: Provinces, Jan. 9-16, 245 cases, 159 deaths.

CHOLERA—FOREIGN

India: Bombay, Jan. 27-Feb. 2, 1 death; Rangoon, Jan. 16-23, 3 deaths.

Russia: Jaroslav, Feb. 18, 2 cases; Rubinsk, 22 cases, 8 deaths; St. Petersburg, Feb. 10-16, 142 cases, 43 deaths.

Straits Settlements: Singapore, Jan. 9-23, 16 deaths.

PLAGUE

Brazil: Para, Jan. 30-Feb. 6, 1 case, 1 death.

Ecuador: Guayaquil, to Jan. 28, 26 cases; Jan. 30-Feb. 6, 3 deaths; Tolte, Dec., 1908-Jan. 28, 20 deaths.

Egypt: General, Jan. 1-Feb. 4, 8 cases, 5 deaths.

India: Bombay, Jan. 27-Feb. 2, 27 deaths; Rangoon, Jan. 16-23, 10 cases.

Indo-China: Saigon, Feb. 9-16, 2 cases, 2 deaths.

Turkey: Jiddah, Jan. 30-Feb. 7, 18 cases, 17 deaths.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

PENDING LEGISLATION

The sessions of the legislatures are drawing to a close in most of the states. Comparatively little legislation has been enacted bearing on medical and public health matters. The majority of bills introduced remain in committees, as usual.

CALIFORNIA

The interest in this state has centered largely on the medical practice act and the attempts to modify it. Specially prominent has been the effort on the part of the so-called "naturopaths" to secure the passage of a law recognizing their "school" and establishing a board of examiners for them. This movement, like the attempt to provide recognition for "chiropractics" in some western states, would seem to be the crowning absurdity of a recognition of "schools" of medicine by the state. There is no probability of the California bill becoming a law. The attacks on the existing medical practice act will probably be futile.

ILLINOIS

The usual osteopathic and optometry bills have been introduced. These bills have been before the legislature for the last three sessions and have always failed to become laws. A most excellent bill, providing for the reorganization of the State Board of Charities and the control of state charitable institutions, has already been discussed in THE JOURNAL. A bill authorizing cities to establish tuberculosis sanatoriums has become a law.

INDIANA

H. B. 44, for the prevention of the pollution of streams, has passed both houses and will probably be signed by the governor. H. B. 308, to regulate the conduct of all buildings in which any article of food is prepared or packed, passed the house with only four dissenting votes and will pass the senate without any opposition. H. B. 510 is to levy a tax of 25 cents on each dog, for the purpose of providing funds to give the Pasteur treatment to all persons suffering from hydrophobia. S. B. 300, to amend the existing State Board of Health Act, would make the secretary of the board the state health commissioner and executive officer of the board, and would make the State Board of Health the superior health board of the state, to which all other health boards would be subordinate. The bill further provides a county health officer for each county, who shall be a legally qualified physician well informed in sanitary science and hygiene. As this bill calls for money for carrying out its provisions, it may encounter some opposition. S. B. 15, to provide for sanitation and the medical inspection of school children, will probably become a law.

IOWA

A bill to authorize counties to levy a tax for the purpose of establishing a county hospital has passed the senate and has been favorably reported on by the committee in the house. A bill to provide for county boards of health and to vest the power to establish quarantine in the county boards has also been introduced.

KANSAS

The food and drugs law has been amended and strengthened materially, providing for a number of additional inspectors and increasing the salaries paid for this work. The water and sewage act has also been strengthened, making it a most comprehensive law. The appropriation for sanitary purposes has been largely increased, enabling the State Board of Health to enlarge its work. The law regarding county health officers has been amended, giving the state board power to remove county health officers for failure or neglect of duty. A law has been enacted making the notification of tuberculosis compulsory, also a strong law for the eradication of tuberculosis in cattle, providing among other things that cities shall have the right to require a tuberculin test on all cows whose milk is sold in the city. A stringent law against expectoration in all public conveyances, buildings and streets has also been adopted. A sum of $10,000 a year for two years has been appropriated for the State Board of Health in inaugurating an educational campaign throughout the state for the suppression and prevention of tuberculosis. Dr. S. J. Crumbine, secretary of the board, says regarding this appropriation: "I believe that Dr. McCormack's talks to the members of the legislature were instrumental in saving the day, for while they had killed the bill once, yet there were enough who had been converted to the idea of 'saving the people' to enable the bill to pass." The only bill advocated by the State Board of Health and the state society which failed to pass was the vital statistics bill, and it is hoped that this may become a law at the next session of the legislature.

MAINE

A bill regulating medical expert testimony has been introduced, which provides that the judge of any court in the state may appoint one or more disinterested medical experts to investigate questions before the court.

MASSACHUSETTS

Two antivaccination bills were introduced, both of which were reported on adversely by the committee. No further action is probable. Two bills providing for the registration of nurses were introduced and later withdrawn. A substitute bill on this subject has passed the house and is now in the senate. Bills prohibiting physicians from dispensing medicines, regulating the moral habits of physicians, and recognizing Eddyism, hypnotism and various other fads and cults, as well as several bills amending the medical practice act, were all withdrawn shortly after introduction. Four bills relating to rabies were introduced and referred to the public health committee, which asked for further investigation of the subject by the State Board of Health. A bill embodying the recommendation of the State Board of Registration in Medicine that a diploma be required of candidates about to take an examination for license and that the practice of medicine be more clearly defined, was withdrawn after being referred to the committee. Osteopathy and optometry bills have been introduced and referred to committees, but no action has yet been taken. The usual antivivisection bills were introduced and are still in committee. A bill consolidating the boards of medicine, dentistry, pharmacy, veterinary medicine and embalming, in accordance with a recommendation of the governor, was reported on adversely by the committee in the senate. No report has yet been made on it in the house.

MISSOURI

Several bills making necessary modifications in the medical practice act have been introduced, as well as a vital statistics bill, providing for the registration of vital statistics in accordance with the model bill of the American Medical Association. An optometry bill has also been introduced.

NEW MEXICO

The following measures are before the territorial legislature: A bill providing for a territorial board of health, consisting of the governor, superintendent of public instruction, attorney general, and the president and secretary of the New Mexico Medical Society, together with the territorial health commissioner, to be appointed by the governor on recommendation of the board of health, such commissioner to be *ex-officio* secretary of the board; a bill providing for the appointment of county health officers by the board of county commissioners on the recommendation of the Territorial Board of Health, also a bill for the control of infectious diseases.

OHIO

A supplementary bill endorsed by the Chamber of Commerce of Cleveland has been adopted, providing that the board of education in each city may, by agreement with the local board of health, provide for medical and sanitary supervision and inspection of the schools.

PENNSYLVANIA

The discussion over the Herbst-Shreve bill, providing for a single board of medical examiners in the state, has occupied the attention of both the profession and the public almost to the exclusion of all other measures. The bill has been endorsed by the Medical Society of the State of Pennsylvania and provides for a single board of medical examiners in place of the triple sectarian boards now in existence. The discussion has been taken up by the newspapers of the state and has been given much space.

UTAH

Bills to regulate itinerant vending of medicines, to amend the state pharmacy law, and to create a state dairy and pure food bureau, are at present before the legislature.

WISCONSIN

A large number of bills along public health lines have been introduced into the legislature, notably bills to regulate the itinerant vending of medicines and nostrums, to regulate bakeries, confectioneries, etc., to regulate the location of slaughter-houses, to establish a state laboratory of hygiene, to regulate the practice of midwifery, to provide standards for food products offered for sale in the state, to provide for the prevention of ophthalmia neonatorum and to provide for the reporting of contagious diseases. A particularly objectionable antivivisection bill, introduced late in the session, is now in the hands of the committee on public health.

Illinois Osteopathic Bill

The judiciary committee of the Illinois House of Representatives gave a hearing last week on House Bill 173, "To Create an Illinois State Board of Osteopaths, and to Regulate the Practice of Osteopathy in the State of Illinois." Several Illinois osteopaths, headed by a spokesman from Missouri, urged the passage of the bill. Dr. J. A. Egan, secretary of the State Board of Health, spoke against the bill. The committee seemed favorably inclined toward the bill, but action was deferred until a later date. As the bill would confer nearly all of the rights and privileges belonging to licensed physicians, at a lower standard of training and qualifications, it should be opposed by physicians as contrary to public policy.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
Bowling Green, Kentucky

[The director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Eighth Month—Third Weekly Meeting

"SYSTEM DISEASES"

A. Afferent (Sensory) System

Locomotor Ataxia. Tabes Dorsalis; Posterior Spinal Sclerosis.

Etiology.—Distribution, race, age, sex. Syphilis. Exposure, fatigue, trauma, alcoholism.

Pathology.—Gross changes in membranes, in cord, in posterior columns; initial changes in dorsal, lumbar, cervical regions. Microscopic changes: Dorsal (coarse) root fibers, dorsal ganglia, blood vessels, pial changes, peripheral nerves. Late changes in spinal ganglia, dorsal roots, peripheral nerves, optic nerve. Changes in motor areas and muscles.

Symptoms.—(a) Incipient Stage: Pains, character and location, crises, paresthesiæ. Ocular symptoms, optic atrophy, ptosis, paralysis of eye muscle, Argyll-Robertson pupil, spinal myosis. Bladder symptoms. Trophic changes, loss of reflexes. Duration of this state. (b) *Ataxic Stage:* Ataxia. Romberg's symptom, gait, station, muscular relaxation. Pains, esthesiæ, retarded pain sense. Reflexes. Crises, gastric, laryngeal, nephric, etc. Trophic changes, skin, nails, ulcerations. Arthropathies, changes in joint. Spontaneous fractures. Cerebral symptoms. (c) Paralytic Stage: Symptoms, duration. Relation of tabes to dementia paralytica. Tabo-paralysis.

B. Efferent (Motor) System

1. Whole System

Progressive (Central) Muscular Atrophy; Amytrophic Lateral Sclerosis. Pathology: Cord changes; ganglion cells and neuroglia of ventral horns, ventral nerve and roots, medullated fibers. Changes in muscles and motor nerves. Gray matter of medulla; white fiber tracts of cord. Symptoms: (a) Atonic or Aran-Duchenne type: Pains; wasting of muscles, beginning and order of involvement. Deformities and contractures resulting. Fibrillation. Sensation, electrical reaction. (b) Tonic type, amyotrophic lateral sclerosis: Spastic paralysis of arms, of legs. Reflexes. Station and gait. Wasting, loss of power. Association of either type with bulbar paralysis.

2. LOWER MOTOR SEGMENT

ACUTE ANTERIOR POLIOMYELITIS.

Etiology.—Age, sex, season, epidemic occurrence.

Pathology.—Early changes in ganglion cells, in entire cord, in meninges: arterial changes, branches involved. Later changes in ventral horn, ventro-lateral column, motor nerves, and muscles.

Diagnosis.—Age, onset, flabby paralysis of one limb, wasting, absence of reflexes, electrical reaction. Differentiate from pseudo-paresis of rickets, from multiple neuritis.

ACUTE ASCENDING (LANDRY'S) PARALYSIS.

Etiology.—Age, sex, acute infections.

Symptoms.—Muscles first involved, order of extension, changes occurring. Reflexes, electrical changes, sensory symptoms. Course, terminations.

Marriages

BRUCE L. GILFILLAN, M.D., to Miss Maude E. Lane, both of Moulton, Iowa, February 24.

CLAY E. GRIFFIN, M.D., Boulder, Colo., to Miss Vera Greenman of Cripple Creek, Colo., February 28.

WALTER MITCHELL HAMMETT, M.D., Baltimore, Md., to Mrs. Emma Child Peerce, at Baltimore, March 3.

JULIAN DECATUR MAYNARD, M.D., Rougemont, N. C., to Miss Myra Estelle Berry of Durham, N. C., March 3.

ROADES FAYERWEATHER, M.D., Baltimore, Md., to Miss Josephine Kirby-Smith, at Sewanee, Tenn., March 18.

DONALD A. NICHOLSON, M.D., Seattle, Wash., to Miss Anna Archer Irwin of Chicago, at Portland, Ore., February 27.

C. PAGE HARRISON, M.D., Fire Creek, W. Va., to Miss Phoebe Virginia Westwater of Columbus, Ohio, recently.

Deaths

Thaddeus Asbury Reamy, M.D. one of the pioneers in the field of gynecology in the middle west; died in Cincinnati, March 11, aged 79. He was born in Virginia in 1829; graduated from Starling Medical College, Columbus, 1854, and later received the degree of A.M. from Ohio Wesleyan University in 1868; and that of LL.D. from Cornell University in 1889. He began his work as a teacher in the Cincinnati College of Medicine and Surgery in 1858. In 1861 he was elected a member of the general assembly of Ohio and a year later was commissioned surgeon of the One Hundred and Twenty-second Ohio Volunteer Infantry, and later served as surgeon to the Thirteenth Provost Marshal's district; he was professor of diseases of women and children in Starling Medical College, Columbus, from 1863 to 1871; professor of obstetrics, clinical midwifery, and diseases of children from 1871 to 1888 in the Medical College of Ohio; and since that time professor of clinical gynecology in that institution. He was obstetrician and Surgeon to the Good Samaritan Hospital, Cincinnati, obstetrician and gynecologist to the Cincinnati Hospital; consulting surgeon to Christ's and Presbyterian hospitals, Cincinnati; and surgeon to Reamy's Private Hospital for Women from 1878 to 1898. His society membership included the American Medical Association, in which he served as chairman of the Section on Obstetrics and Diseases of Women in 1873; the Ohio State Medical Society, of which he was president in 1871; the American Gynecological Society, of which he was vice president in 1881 and president in 1885; Cincinnati Academy of Medicine, of which he was president in 1877; Cincinnati Obstetrical Society, of which he was president in 1884, and other learned societies. He was an extensive contributor to the literature of his specialty. For about four years he had suffered with nephritis, and five weeks ago, while in Kansas City, was taken seriously ill and brought to the home of his nephew, Dr. William Gillespie in Cincinnati, where he died March 11.

Edward Andem Whiston, M.D. Harvard Medical School, Boston, 1861; surgeon of the First and Sixteenth regiments, Massachusetts Volunteer Infantry during the Civil War; and for two years thereafter port physician of Boston; for many years a practitioner of Boston; for several years editor of the *New-Church Review;* one of the founders and for a long time active in the management of the Newton Hospital; died at the home of his daughter in Springfield, Mass., February 23, from cerebral hemorrhage, aged 70.

Martin H. Boye, M.D. University of Pennsylvania, Philadelphia, 1844; and a year later elected professor of natural philosophy and chemistry in the Central High School of Philadelphia; a graduate of the University of Copenhagen, Denmark; an eminent geologist, and a pioneer in the experimental making of smokeless powder and the purification of cotton-seed oil; died at his home in Coopersburg, Pa., March 5, from senile debility, aged 97.

Frederick W. Sparling, M.D. University of the Victoria College, Coburg, Ont., 1854; major and surgeon of volunteers during the Civil War; and afterward acting assistant surgeon in the U. S. Army; in 1880 placed in charge of the census of the State of Washington; and later appointed registrar of the land office at Vancouver, quartermaster general of the state, and inspector of immigration; died at his home in Seattle, March 1, aged 83.

Henry Isaac Jones, M.D. L.R.C.S. and L.R.C.P. Edinburgh, 1866; L.F.P.S. Glasgow; Western Reserve University, Cleveland, 1884; a member of the Medical Society of the State of California; during the Civil War assistant surgeon in the Confederate Navy, serving on the cruisers *Florida* and *Georgia;* later surgeon in the British service in India; died at his home in Oakland, March 9, from disease of the liver, aged 64.

Milton Sawyer Woodman, M.D. Dartmouth Medical School, Hanover, N. H., 1889; a member of the New Hampshire Medical Society, New Hampshire Surgical Club; New Hampshire Antituberculosis Society, and New York and New England Railway Surgeons' Association; surgeon for the Concord division of the Boston and Maine Railway; died at his home in West Lebanon, N. H., February 27, aged 58.

Charles Brewer, M.D. University of Maryland, Baltimore, 1855; from 1858 to the outbreak of the Civil War a member of the medical corps of the Army, and during the war a surgeon in the Confederate service; postmaster of Vineland, N. J., under President Cleveland; and resident physician at the State Prison, Trenton, from 1891 to 1896; died at his home in Vineland, March 3, aged 76.

Isaac Ambrose Barber, M.D. Hahnemann Medical College, Philadelphia, 1872; president of the Farmers' and Merchants National Bank of Easton; a member of the state legislature in 1895; and member of congress from the first congressional district of Maryland in 1896; died suddenly at his home in Easton, March 1, from cerebral hemorrhage, aged 57.

Joseph Schmittle, M.D. New Orleans School of Medicine, 1862; a member of the Louisiana State Medical Society; for more than thirty years attending physician to the German Orphan Asylum and Fink Home, New Orleans; one of the most highly esteemed practitioners of New Orleans; died at his home March 5, from disease of the pancreas, aged 80.

James Scribner Brown, M.D. University of Pennsylvania, Philadelphia, 1896; a member of the American Medical Association and Manchester (N. H.) Institute of Arts and Sciences; formerly president of the Manchester Medical Society; surgeon to the Sacred Heart Hospital; died in that institution February 22, from pneumonia, aged 37.

William K. Gatewood, M.D. Medical College of Virginia, Richmond, 1859; a member of the Medical Society of Virginia; Society of Southern Railway Surgeons; surgeon in the Confederate service during the Civil War; health officer of West Point, Va.; died at the home of his daughter in Marion, S. C., March 7, aged 73.

George Washington Beeman, M.D. Detroit (Mich.) College of Medicine, 1899; a member of the Emmet County Medical Society; died at his home in Harbor Springs, Mich., February 16, from the effects of carbolic acid, believed to have been self-administered with suicidal intent, while despondent, aged 49.

George Washington Lewman, M.D. Cincinnati College of Medicine and Surgery, 1860; assistant surgeon of the Eleventh Illinois Volunteer Infantry during the Civil War; for many years president of the First National Bank of Louisville, Ky.; died at his home in that city, January 7, from cancer, aged 74.

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LOCOMOTOR ATAXIA. Tabes Dorsalis; Posterior Spinal Sclerosis.

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at his home in Benson, Neb., Janu

endocarditis aged 74

gan, M.D. Long Island Hospital College

formerly of Condon, Ore., died in Mount St

Home for the Aged near Roseburg, Ore., February

cancer of the throat, aged 70

Clark, M.D. Medical College of Ohio, Cincinnati.

the Indiana State Medical Association and

War, died at his home in Monticello,

1, aged 61

M.D. Missouri Medical College, St.

Ill.; died in St. Mary's Infirmary,

after an operation for the re-

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the Medical Society of the

at his home in Santa Bar-

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Medical Association of

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Y.) Medical College,

he American Medical

years a

field, February 21,

Baldwin Mathew Buckner, M.D. Jefferson Medical C

Philadelphia, 1857; died at his home in Wolftown

ruary 8. from chronic diarrhea, aged 76

Albert Francis Robbins, M.D. Hahnemann Medical C

Philadelphia, 1870; of Seely Creek, N. Y. died at h

February 7. from heart disease, aged 64

Haskel R. Wood, M.D. Eclectic Medical Institute C

nati, 1872; died at his home in Galesburg, Ill. F

from cerebral hemorrhage, aged 76

Roscoe R. Hodges (license Okla., 1908), form

of Grant, Okla.; died suddenly at the home of his

West Paris, Texas, February 27.

John Sanford (years of practice, Ga.); a hospital

in the Civil War; died at his home in Towns from

tis January 22, aged 72.

Pierre Francis Casgrain, M.D. University of the

College, Coburg, Ont., 1875; died at his home in

February 28, aged 58.

E. Gustave Paquette, M.D. University of the

lege, Coburg, Ont., 1884; died at his home in

March 5, aged 49.

E. M. Rust, M.D. Louisville (Ky.) Medical Coll

Merkel, Texas, February 28

Book Notices

MEDICAL INSPECTION OF SCHOOLS. By Luther Halsey Gulick, M.D., Director of Physical Training, New York Public Schools, and Leonard P. Ayres, General Superintendent of Schools of Porto Rico, 1906-1908. Cloth. Pp. 276. Price, $1.00. New York: Charities Publication Committee (Russell Sage Foundation), 1908.

Gulick and Ayres say that the importance of steps looking toward the health of our public school children is indicated by the following facts: 1. The school is the only governmental department that assumes control of children's lives. 2. At least nine out of every ten American children are subject to this control. 3. Such control is maintained (roughly speaking) during the critical years from 7 to 14. The author's effort has been to produce a practically useful and reliable book, not making light of or evading problems and difficulties yet to be solved, but avoiding all dogmatism in theorizing. The nature and aims of medical school inspection are twofold. The first directs attention to steps necessary for the immediate present in the preservation of the community against invasion by contagious disease. The records of this phase of medical school inspection are concerned almost if not entirely with disease or actual deformity. This is the medical viewpoint. The educational view is directed toward the future and deals with the development of the race. The authors point out the complete change that has come over the mode of life of practically the entire civilized world. In past centuries most of the people of the world have been engaged in some form or other of muscular labor for most of their years. The shifting of the burdens of labor from human muscles to the great powers of Nature has affected work and play, the two chief agencies for the development of children into adults having strong vitality and clean morals. For the boy, the all-round farm, where he learned the rudiments of a dozen trades, has been displaced by the specialized farm; for the girl, the multifarious occupations of her mother at home as housewife, which formerly formed her training school, are also distributed where they can be done more effectively and economically. As to play, this is being attacked from three directions; namely, time for play, space for play, and traditions for play. The encroaching school hours are gradually annihilating the first; the growing cities are making inadequate provision for the second; and, with the constant migration, the traditions which in older times passed down from generation to generation, are gradually disappearing. "The justification of the state in assuming the function of education and in making that education compulsory, is to insure its own preservation and efficiency, which will depend on that of its individual members"; but, on the other hand, "this individual efficiency rests not alone on education and intelligence, but is equally dependent on physical health and vigor. Hence, if the state may make mandatory training in intelligence, it may also command training to secure physical soundness and capacity."

After a historical sketch of the rise, development, and present status of medical inspection at home and abroad, Gulick and Ayres discuss the methods adopted in small and large cities for the detection of contagious diseases in schools, describing and giving specimens of the forms used in Brockton, Mass., New York, Providence, R. I., and Chicago. They discuss the work of the teacher in detecting contagious disease and also the work of the school nurse; physical examination for the detection of non-contagious defects, especially vision and hearing, together with a preliminary test used by teachers regarding vision and hearing. They distinguish four classes of systems in force in different parts of the States (1) examination for the detection of physical defects conducted by teachers and usually limited to vision and hearing; (2) examination by physicians for contagious diseases only; (3) medical inspection by physicians, taking in contagious diseases and physical defects; and, (4) systems combining the teacher's examinations for defects of vision and hearing with the physician's examination for detection of contagious diseases and non-contagious physical defects. In discussing salaries of medical inspectors the authors put their [illegible] of the weak points of all American systems," [illegible] using up of the higher paid physician's time in mere clerical labor that could be equally efficiently and much more economically effected by less highly paid clerical assistants. The control of authorities, the legal aspect of medical inspection, the educational economies affected through medical supervision are dealt with in turn. With regard to this last, they conclude that medical inspection and school administration must be more closely related and interlocked than has been the case heretofore.

The book contains an excellent bibliography and some useful appendixes. It is distinguished by the clearness of its type and by the matt surface of the paper and its lightness, so that the book strains neither the eyesight to read nor the muscles to hold. The abominably heavy and glazed paper on which many of our modern books are printed, in itself forms a suitable subject for the consideration of the medical inspectors of schools. The publication of this work is timely; this country is at least rising to an apprehension of the fact that it is lagging behind European countries in this matter. The Charities Publication Committee has done an excellent work in this publication, and we commend it to the earnest attention of all interested in the subject.

DISEASES OF THE NOSE, THROAT AND EAR. By Francis R. Packard, M.D., Professor of Diseases of the Nose and Throat in the Philadelphia Polyclinic Hospital and College for Graduates in Medicine. Cloth. Pp 369, with illustrations. Price, $3.50. Philadelphia: J. B. Lippincott Co.

This book, comprising 351 pages and 135 illustrations, was primarily written for post-graduate students and practitioners and does not purport to be a complete treatise on the subjects embraced within its scope. The surgery of the nose, throat and ear has made such tremendous strides within the past ten years that the operations usually included in American text-books have failed to represent the true status of this field of surgery. It is to be regretted that the author did not describe all of the operative procedures of accepted value.

Some of the anatomic plates are new and of exceptional merit, while others are old and below the standard. The illustrations of the operative technic are conspicuous by their rarity, and those given are from very poor photographs of work on cadavers. The descriptions of nasal reflexes, grippe, and the eye in relation to the nasal sinuses, are excellent.

The etiology of deviations of the septum is dismissed with the statement that these deviations are often due to traumatism. The unequal development of the bones of the face, a long-recognized cause of deflections, is not mentioned.

The only discussion of direct laryngoscopy and bronchoscopy is comprised in the statement that the instrumentarium is expensive and complicated and that the technic required for its use too difficult to be generally practiced, an opinion with which we do not agree.

The operative technic for cancer of the larynx is not given, while the medicinal and surgical treatment of chronic catarrhal otitis media and adhesive processes in the middle ear is well presented. The surgical diseases of the mastoid are briefly but clearly described, while labyrinthine suppuration is omitted. This is to be deplored, as this phase of otology has recently engaged the liveliest attention, especially as to diagnosis and treatment. The work of Barany, Neumann, Alexander, von Stein and others in showing the clinical significance of nystagmus of vestibular origin has opened a new field in otologic practice, and a modern text-book which fails to give practical deductions from it fails on a crucial point.

While calling attention to some of the elements of weakness in this book, we also recognize its excellent qualities and commend it to the favorable consideration of students and practitioners. The literary style is above the average, and the descriptions of operations are generally lucid and to the point.

A HANDBOOK OF SUGGESTIVE THERAPEUTICS, APPLIED HYPNOTISM, PSYCHIC SCIENCE By Henry S. Munro, M.D., Americus, Ga. Second Edition. Cloth. Pp 360. Price, $3.00. St. Louis: C. V. Mosby, 1908.

According to the author's preface, "this book is *not intended* principally or even mainly [*sic*] for neurologists and psychotherapeutists, to whom the constant repetition of what to them are well-known facts must inevitably prove wearisome. It is intended rather to instill into the vast mass of the profession, to whom this entire field is as yet *terra incognita*, those basic principles of physiologic psychology on which the scientific therapeutic application of suggestion in all its forms necessarily depends." Judged from this standpoint the book contains a great deal of useful and practical matter, and the fact that a large edition was exhausted and a second edition called for within nine months seems to indicate that it fills a want.

Dr. Munro writes from practical experience in hypnotic work. The discursiveness of his style, which would probably be a defect in a more pretentiously scientific text-book, may be a virtue in the sight of those readers for whom the book is ostensibly intended, though they will hardly see the necessity probably for so much dragged-in reference to monistic philosophy and the moneron.

From a mechanical point of view the book hardly does justice to the author and is small credit to the publisher. To single out one particularly objectionable instance, the pages are disfigured throughout by blotches of black-faced type, scattered broadcast without any evident object—even of emphasis, for many passages so printed are absolutely devoid of any special significance.

Report of Special Commission Appointed to Investigate Tuberculosis. State of Connecticut. Public Document. Commission Appointed by the General Assembly of 1907. H. J. Resolution No. 426. Paper. Pp. 86. Hartford: Published by the State.

This report of the special commission, appointed in 1907 to ivestigate tuberculosis, gives a general account of the disease Connecticut with recommendations as to the duty of the tate and as to needed legislation, and the results of an interesting investigation of the prevalence of tuberculosis in rural districts. As there are no large cities in Connecticut, the evil effects of overcrowding are less manifest than in some other states. The counties containing the larger towns show a slightly greater death rate from tuberculosis than those in which there are smaller towns and villages. The report indicates that "human tuberculosis has occurred in all parts of Connecticut—highland and lowland and plains; in city or village. There is considerable evidence to show that in rural Connecticut human tuberculosis occurs most frequently in badly drained districts and in houses with damp cellars. The reports received do not support the view that in rural Connecticut cases of consumption occur frequently in close proximity to insanitary barns or coops." Factory conditions are considered in a separate chapter and the laudable work of the Providence employers in providing a physician to make early diagnoses in the case of employés who cough and lose appetite or weight is noted. In considering the state care of indigent consumptives the establishment of county homes on farms near the larger towns is recommended. The importance of avoiding extravagance in construction and saving money to care for the patients is emphasized. The report concludes with an investigation of the subject of tuberculosis in cattle.

Arsenic Gas Poisoning. By John Glaister, Doctor of Medicine of the University of Glasgow. Cloth. Pp. 279, with illustrations. Price, $1.25. Edinburgh: E. & S. Livingstone, 1908.

Considering the extremely poisonous character of arseniuretted hydrogen, and the varied pursuits in which persons may be exposed to its action, comparatively little attention has been paid to it in works on toxicology and forensic medicine. Glaister has collected 120 reported cases of poisoning by this gas and discusses its properties and sources, and the relation of cases of poisoning to scientific and industrial operation. Chapters on the symptoms and postmortem appearances, diagnosis and treatment, illustrated by cases, follow. The relation of arsenical poisoning from wall paper, through the liberation of arsenic-containing gases by the growth of the molds, is taken up. The monograph closes with a synoptical account of the recorded cases of poisoning by arseniuretted hydrogen and chapters on analytical methods for the detection of arsenic. This little book will prove of great value to those at all interested in the subject.

Soured Milk and Pure Cultures of Lactic Acid Bacilli in the Treatment of Disease. By George Herschell, M.D., Lond., Fellow of the Royal Society of Medicine. Cloth. Pp. 32, with illustrations. Price, 1 shilling 6 pence. London: Henry J. Glaisher. Chicago: W. T. Keener & Co., 1909.

This book contains a short discussion of intestinal putrefaction, taken largely from Herter's book on "The Common Bacterial Infection of the Digestive Tract," and of the natural defenses of the intestinal tract. This is followed by some directions for making simple chemical tests to diagnose putrefactive conditions. Too much stress is laid on the microscopic appearance of gram-stained preparations of the feces, as it is not an easy matter to obtain representative samples and to interpret the appearance correctly. A good deal is said about acclimatization of the Bulgarian bacillus, a matter which has not been determined in a sufficiently accurate manner to be above criticism. Different commercial preparations for the home manufacture of fermented milks are discussed. The advice is given to use only those preparations which contain the Bulgarian bacillus in pure culture. As a matter of fact, hardly any of the commercial preparations contain this organism at all, and pure cultures are difficult to obtain. The erroneous statement is made that tubercle bacilli are not killed by pasteurization at 60 degrees C. On the whole, the book adds little or nothing to our knowledge of the subject and may possibly mislead by giving too much confidence in the beneficial results following the use of lactic-acid-producing bacteria.

Hernia. By W. McAdams Eccles, M.S. (Lond.), F.R.C.S. (Eng.), Examiner in Surgery to the Society of Apothecaries; Examiner in Anatomy for the Fellowship of the Royal College of Surgeons of England. Third Edition. Cloth. Pp. 234, with illustrations. Price, $2.50. New York: William Wood & Co., 1908.

This edition differs little from its predecessors. Considerable space is devoted to non-operative treatment which Mr. Eccles states is in danger of being neglected, owing to the number of hernia operations in vogue at the present time. The book is well illustrated.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Arizona: Phoenix, April 5-6. Sec., Dr. Ancil Martin.

Arkansas: Three boards, each at Little Rock, April 13. Regular Sec., Dr. F. T. Murphy, Brinkley; Homeopathic Sec., Dr. P. C. Williams, Texarkana; Eclectic Sec., Dr. A. J. Widener, Little Rock.

California: San Francisco, April 6. Sec., Dr. Charles L. Tisdale, Butler Bldg.

Colorado: Denver, April 6. Sec., Dr. S. D. VanMeter, 1723 Tremont St.

District of Columbia: Washington, April 13-16. Sec., Dr. George C. Ober, 210 B St., S. E.

Idaho: Boise, April 6-7. Sec., Dr. W. F. Howard, *Pocatello*

Illinois: Northwestern University Bldg., Chicago, April 15-17. Sec., Dr. J. A. Egan, Springfield.

Minnesota: Old Capitol, St. Paul. April 6-9. Sec., Dr. W. S. Fullerton, 214 Am. National Bank Bldg.

Montana: The Capitol, Helena, April 6. Sec., Dr. W. C. Riddell.

North Dakota: Grand Forks, April 6-8. Sec., Dr. H. M. Wheeler.

Oklahoma: Guthrie, April 13. Sec., Dr. Frank P. Davis, Enid.

Rhode Island: State House, Providence, April 1-2. Sec., Dr. Gardner T. Swarts, 315 State House.

Utah: Salt Lake City, April 5-6. Sec., Dr. R. W. Fisher.

West Virginia: Huntington, April 13-15. Sec., Dr. H. A. Barbee, Point Pleasant.

Another Innovation in Medical Education

Attention has frequently been called to the rapid progress which has been made during the last few years in medical education, and to several innovations which have been initiated during this development. In Indiana,[1] five medical schools united to form one, the medical department of Indiana University, and in Kentucky,[2] five separate colleges united under the name of the University of Louisville Medical Department. In both these instances one fairly strong college replaced several which were not so strong with the result that they are now receiving considerable financial aid.

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[1] The Journal, Aug. 25, 1906, p. 588.
[2] The Journal, Aug. 15, 1908, p. 610.

Attention was called to the fact that in Cincinnati[2] two colleges united to form one stronger college, the Medical Department of the University of Cincinnati, which will be opened the coming fall with very favorable prospects. This was particularly interesting, since it was the first medical college to be supported by a municipality. The building of the new Cincinnati Hospital, the clinical material of which is to be under the control of the city's new medical school, is a matter of much interest at present.

The arrangement by a number of state universities whereby the first two years of the medical course were given at the seat of the university, while the last two or clinical years were offered in the largest city of the state has also been referred to,[3] resulting in the division of the medical course. At Cornell University and at Indiana University this plan was modified by offering the work of the first two years both at the seat of the university and in the largest city. Now in California we have another modification of this plan whereby the first two years of medicine are offered only at the seat of the university, while the last two years' work may be taken at either one of two large cities. This plan was brought about as follows:[4]

On February 9, the Board of Regents of the University of California accepted from the College of Medicine of the University of Southern California, located at Los Angeles, all the property of the latter institution, and made it the Los Angeles Medical Department of the University of California, a similar medical department having been previously established at San Francisco. Instruction in the first two years will be given at Berkeley, but the medical student may choose either the San Francisco or the Los Angeles departments for his subsequent training.

Another special point of interest in this merger is that it shows a way in which the state may acquire a firmer grip on medical education by having departments of instruction in the two or more cities of the state which may be large enough to warrant the establishment of clinical departments, and may also be an important factor in influencing legislatures to secure the passage of laws establishing fair standards of preliminary and medical education. The example set by California in the matter is certain to be watched with much interest by medical educators throughout the country.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

California, Medical Soc. of State of, San Jose, April 20.
District of Columbia, Medical Assn. of, Washington, April 27.
Florida Medical Association, Pensacola, April 7-9.
Georgia, Medical Association of, Macon, April 21.
Mississippi State Medical Association, Jackson, April 13.
South Carolina Medical Association, Summerville, April 21.
Tennessee State Medical Association, Nashville, April 13-15.
Tropical Medicine, American Society of, Washington, April 10.

CHICAGO MEDICAL SOCIETY

Regular Meeting, held Feb. 17, 1909

The President, DR. ALFRED C. COTTON, in the Chair

SYMPOSIUM ON ACUTE DIFFUSE SUPPURATIVE PERITONITIS

Etiology, Pathology and Diagnosis

DR. BERTRAM W. SIPPY: The disease is said to be primary when infection of the peritoneum takes place through the medium of the blood or lymph channels, there being no recognizable focus of infection in the abdomen from which infection could spread by continuity. Diffuse peritonitis of hematogenous origin is not rare. The most common origin of diffuse suppurative peritonitis is the appendix. Next in order of frequency are the various disorders of the intestines, including perforating typhoid, ulcer, uremic, dysenteric, stercoral, and simple ulcer; the sloughing of an intestinal neoplasm, strangulation, volvulus intussusception, kinking hernia, infarction, traumatic rupture, perforation of sharp foreign bodies, or by bullets, or from the introduction of a rectal bougie, the nozzle of a syringe, the use of enemas under high pressure, etc. Almost equally as frequent is infection from the stomach and duodenum, chiefly from the perforation of a peptic ulcer, and the sloughing of gastric neoplasms. Infection from the female genital organs stands next in frequency. Diffuse suppurative peritonitis rarely results from pyosalpinx. Disease of the gall bladder and bile tracts is probably next in frequency, after which come disease of the kidney and urinary bladder, including rupture; then suppurative disease of the liver, pancreas, mesenteric glands and spleen. The factors that aid the peritoneum in overcoming the bacterial invasion are: First, the ability of the peritoneum to absorb micro-organisms and pass them on into the lymph channels before they have time to grow and develop toxins and give rise to peritonitis; second, the phagocytic action of the leucocytes and endothelial cells, particularly those proliferated by the omentum; third, the destruction of bacteria and the neutralization of their products by the peritoneal fluid.

Early diagnosis is important. The onset varies so greatly with the cause and character of the infection that the early diagnosis of the disease practically resolves itself into a diagnosis of the various conditions giving rise to it. In acute perforation from gastric or duodenal ulcer the onset of pain is sudden and usually terrific. The pain of diffuse suppurative peritonitis is general, although it may be more marked in the region of the umbilicus or right iliac fossa. Tenderness on pressure is a constant symptom except when the sensitiveness of the patient is blunted by toxemia Tenderness is likely to be universal, and may be elicited by rectal and vaginal examination. Abdominal rigidity, involving all the muscles of the abdomen, is a valuable sign. The temperature is variable, and is therefore of no great diagnostic value in this disease; it is often subnormal. The pulse is nearly always accelerated; as the disease advances it usually becomes somewhat irregular, very rapid, and rises to 160 or more. A number of conditions simulate the onset of a diffuse suppurative peritonitis. The most accurate conclusions are likely to be based on a thorough understanding of all possible causes and the clinical picture simulating diffuse suppurative peritonitis, together with a careful analysis of the signs and symptoms of the indivdual cases, backed by a wide experience.

Prevention and Inhibition of Diffuse Suppurative Peritonitis

DR. A. J. OCHSNER: Diffuse suppurative peritonitis can be prevented or inhibited most successfully by observing the following conclusions:

1. A careful physical examination should be made in every patient suffering from nausea, vomiting, digestive disturbance, gaseous distension or pain in any portion of the abdomen, so that an early diagnosis can be made and proper treatment instituted at once.

2. A diagnosis of chronic appendicitis, gastric or duodenal ulcer or gallstones should be made through a careful study of the history and physical examination and relieved by proper treatment before a perforation is possible.

3. Patients suffering from intestinal obstruction, whether this be due to strangulated hernia, constriction by bands of adhesive volvulus, intussusception or kinking of the intestine, Meckel's diverticulum, gallstone or carcinoma should be *operated* on at once, and they should never under any condition receive either cathartics or food by mouth after this condition is even suspected.

4. Gastric lavage should be *employed in these cases* at once, and again immediately before operation and it is well to leave a stomach tube, preferably the form invented by Kausch, in the stomach to drain out any intestinal fluid which *may* regurgitate during the operation.

5 Opium in any form should never be given before a diagnosis has been made and never in the *presence of any* form of peritonitis unless gastric lavage has been made: *and the introduction* of every form of nourishment and cathartics by mouth is absolutely prohibited. This applies to even the simplest forms of liquids like *beef tea or* broth and also to the use of champagne and other stimulants.

6. This applies quite to the same extent to postoperative treatment.

7 In military surgery it is most important as a prophylactic measure that soldiers enter the firing line with empty stomachs and intestines.

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[3] THE JOURNAL, July 11, 1908, p. 152, and July 18, 1908, p. 229.

[4] THE JOURNAL, Feb. 27, 1909, p. 709.

8. Abdominal wounds made during battle with large objects like *splinters from shells* indicate immediate operation.

9. Abdominal wounds inflicted in battle by small caliber bullets in the absence of hemorrhage should be treated by absolute rest; not even water should be given by mouth.

10. An exception should be made in cases which can be in the hands of the operating surgeon with satisfactory assistants and facilities within two hours after the injury. Under these conditions an immediate abdominal section is indicated.

11. Gastric lavage *should be done at once in every patient suffering* from any form of peritonitis except from stomach or duodenal perforation, if nausea or vomiting, or gaseous distension is present, no matter what other form of treatment may be contemplated.

12. *No food of any kind whatever and no cathartics should ever be* given by mouth in the presence of peritonitis, no matter what other *form* of treatment may be contemplated.

13. Even water by mouth should be prohibited until the patient is well on the way to recovery.

14. Instillation of normal salt solution *by the drop method by* rectum, introduced by Murphy, is one of the most valuable means of inhibiting peritonitis.

15. In rare cases in which this method can not be employed the normal salt solution should be given subcutaneously in quantities of from 500 to 1,000 c.c.

16. Large enemata, except by the drop method, should never be given in peritonitis.

17. In order to prevent postoperative peritonitis, it is important *never to traumatize the intra-abdominal organs* unnecessarily during operation.

18. Much less handling of the intestines is necessary if these are not distended with gas, a condition which can best be *secured by* giving the patient two ounces of castor oil on the day before the operation, but this should *never be given in the presence of even* the slightest amount of peritonitis of any form.

19. *Gastric lavage following abdominal section* often prevents incipient peritonitis from progressing by inhibiting peristalsis; it should always be employed in the presence of nausea or vomiting or gaseous distension.

20. In acute appendicitis the appendix should be removed before the infection has extended beyond the organ.

21. In chronic appendicitis the organ should be removed before it has an opportunity to cause an acute attack.

22. In an ac[illegible]n which the patient has been carried through [illegible]peration, it is well to confine the individual [illegible] diet until the appendix has been removed.

23. In *patients* with acute appendicitis, either perforative or gangrenous, who have received some form of food or cathartics after the beginning of the attack, and are consequently suffering from beginning diffuse peritonitis gastric lavage, absolute abstinence from food and cathartics by mouth and the instillation of normal salt solution by the drop method by rectum are indicated.

24. This will result in the increase of resistance against infection *to such an extent that 98 per cent. of these patients* can later be operated on with safety.

25. Feeding should be entirely by enemata, preferably consisting of one ounce of a concentrated liquid food, dissolved in three ounces of normal salt solution, given slowly every three or four hours, through a small rubber catheter introduced into the rectum not more than three inches.

26. From 10 to 30 *drops of deodorized tincture of opium should* be added to each rectal feeding until there is no longer any pain.

27. It is important for the general practitioner and the general public to become familiar with the danger of giving any kind of nourishment or cathartics by mouth in the presence of impending peritonitis from any cause.

Treatment of Acute Diffuse Suppurative Peritonitis

Dr. John B. Murphy: *The type of peritonitis* that comes to the surgeon, as a rule, is the perforative variety. In this variety the peritonitis occurs as the result of gastric or duodenal perforation, perforation of intestinal and typhoid ulcers, appendiceal perforation, sigmoid sinus perforation, and perforations of malignant ulcers of the large intestine. Whenever these *perforations occur* into the free peritoneal cavity, without the formation of a circumscribed abscess, diffuse or spreading, general peritonitis results. In the traumatic variety of peritonitis from contusions and concussions, and in the chemical variety—a variety which occurs, for instance, from trypsin from the rupture of the pancreas —there rarely is a large *accumulation* of fluid. These patients are but little improved by opening the abdomen and establishing drainage. Recently I saw a case of the chemical variety which was produced by turpentine, a large quantity of which had been injected into the uterus for the purpose of producing an abortion. The resulting *peritonitis* involved the lower half of the *abdomen.* I saw the patient a week after the injection, when the abdomen was enormously distended; the kidneys were suffering severely. She was let alone because the fluctuating mass within the pelvis was due to the pus produced by turpentine, and, as the material was encapsulated, there was no hurry in opening the abdomen. A week or ten days *thereafter* an opening was made through Douglas' pouch and the pus and turpentine were allowed to escape. The tuberculous type of peritonitis needs entirely different management from the acute septic, perforative type.

In diffuse suppurative peritonitis the surgeon should first learn what not to do. He should *know* what favors the spread of infective material. He should know that abrasions and fresh surfaces favor the absorption of septic products, and that the constitutional resistance of the patient is not built up or maintained by a prolonged operation or by prolonged anesthesia. *In the management of these cases* first relieve the pus tension; second, do it in the *shortest possible* time and without manipulation or handling of the viscera; third, close the opening so as to stop the continuation of the supply of infective material; fourth, continue, so far as possible, to relieve pressure; fifth, increase the elimination of the *patient. This can be done by large quantities* of water injected into the skin, into the veins, or *possibly into the* rectum, if slowly administered.

Sequelæ of Acute Diffuse Suppurative Peritonitis

Dr. Charles Davison: Localized abdominal abscess is a rather common sequelæ. A small area either retains the orignal infection in a latent or encapsulated condition or else becomes reinfected from the intestine or blood stream. Whenever there is an insult or injury to any of the peritoneum-covered viscera sufficient to displace or to disintegrate the delicate endothelial covering, the omnipresent omentum makes an attempt to cover the injured surface by protective adhesions. The intestine surrounded and infiltrated by granulation tissue becomes obstructed as the granulation tissue undergoes cicatrical contractions, pinching the intes*tine in from all directions. Fecal fistula follows acute diffuse* suppurative peritonitis when (*a*) *a causative perforation* has not been closed or has not healed; (b) when the infection has been so severe that a portion of the bowel wall sloughs; (c) when the inflamed friable gut has received a mechanical injury at the time of operation, either an actual tear or injury sufficient to produce a slough through the wall of the *intestine. In the final cleaning-up process* of the abdomen by the lymphatics, the retroperitoneal, mediastinal glands become engorged and weakened by septic material and are fertile soil to pick up, arrest and propagate any tubercle bacilli that may have wandered into the peritoneal cavity. *Postoperative ventral hernia follows acute diffuse suppurative* peritonitis in *proportion* to the amount of injury to the abdominal wall, to the size of the surgeon's drainage openings, to the length of time of drainage and to the amount of suppuration in the abdominal wall itself.

Discussion on Peritonitis

Dr. Fenton B. Turck: In my research work on peritonitis one of the first things of importance I found was the resistance of the animal to infection. In 1900, I *showed* that when the peritoneal cavity is in a normal condition one *may inject even virulent micro-organisms into it without* deleterious effects, but as soon as the viscera is exposed to the air for a certain period of time, by injecting the *Staphylococcus albus* it is possible to produce a general peritonitis, which invariably ends in death. The colon *bacillus,* which under *normal* conditions produces no *effect when injected* into the peritoneal cavity, when the viscera of dogs is exposed, will set up peritonitis, followed by a fatal termination. When the viscera of the animal is exposed for a long time to the air, or by prolonged anesthesia, the serum loses its protective power against the ordinary ferments. *I found* that trypsin, pepsin and other ferments were inhibited in their action by the serum of these animals under *normal* conditions, but as soon as infection was allowed to take place, or the viscera exposed to the air for a certain period of time, the serum lost its inhibitory power.

Dr. Victor J. Baccus: *I do not* think the majority of surgeons would agree to the definition of diffuse suppurative peritonitis as given by Dr. Murphy. I take it, a diffuse suppurative peritonitis is a condition in which the *infection* has invaded the entire peritoneal cavity. How can one tell when this infection is general or local? A case in point: A patient was seen in the *morning* with all the evidences of peritonitis lasting twelve hours. A diagnosis of acute general peritonitis secondary to an acute suppurative and gangrenous appendicitis was made, based on the ground that the patient gave a history of previous attacks of appendicitis. He had all the symptoms of a general peritonitis. On opening the abdomen, however, the appendix was found to be normal. There was a leakage of fluid along the ascending colon and the escape of bile. A diagnosis was then made of perforative gastric ulcer or rupture of the gall bladder. Accordingly, an incision was made above and drainage established below, the patient making a beautiful recovery.

NEW YORK ACADEMY OF MEDICINE
SECTION ON OBSTETRICS AND GYNECOLOGY

Regular Meeting, held Feb. 25, 1909

DR. JOHN O. POLAK in the Chair

Tuberculosis and Pregnancy

DR. CHARLES C. TREMBLEY, Saranac Lake: The following observations are based on a review of 240 cases, nearly all being between the ages of 25 and 36. There are 113 multiparæ and 127 primiparæ. A positive history of tuberculosis originating after the birth of the child, or during pregnancy, was given in 151, or 63 per cent; 103 showed their first symptoms during the puerperium. Although 42 patients were recorded as having had a miscarriage, in only 3 cases did the history even suspiciously point to this as a starting point. A history irrespective of pregnancy was given in 89, or 37 per cent. Of the 151 patients who showed first symptoms during pregnancy, 44, or 29 per cent., were I-para; 68, or 45 per cent., were II-para; 39, or 26 per cent., were III-para. Of these at present 80, or 53 per cent., are dead, and 71, or 47 per cent., are living. Of the 81 not traced to pregnancy or the puerperium, 30, or 34 per cent., were I-para; 41, or 46 per cent., were II-para; and 18, or 20 per cent., were III-para. Of these at present 36, or 41 per cent., are dead, and 53, or 59 per cent., are living. As regards conditions on arrival in the mountains, the definite cases exhibited 29 per cent. of incipient disease, and 71 per cent. of advanced and far advanced, the indefinite showing 34 per cent. of incipient, and 66 per cent. of advanced and far advanced. The cases definitely traced showed 53 per cent. of deaths, and those not attributable to pregnancy showed only 41 per cent. This large percentage of deaths after pregnancy seems to indicate that in these cases the protective influence noted during pregnancy has been removed, leaving a condition of lowered vitality and resistance to the action of the tubercle bacillus. Pregnancy occurring in the course of an active tuberculous process is a menace to the future health of the woman. The only rational course to pursue when pregnancy occurs in tuberculous women, and when it is recognized in the early months, is the radical method of intervention. The only patients who called for hesitation were (1) those who had been discharged as cured, and had remained absolutely without symptoms for at least one year; (2) patients in the terminal stage with progressive signs; (3) serious dissemination complicating the pulmonary lesions.

The following results are based on a series of 29 cases of therapeutic abortion which have come under my observation and exhibit a striking contrast to the patients allowed to complete the pregnancy. They represent all stages of the disease, and all but one were induced before the fifth month. Of the cases considered, 3 were very active cases of an advanced type; 6 were mildly progressive of an advanced type; 4 were mildly progressive of an early type; 5 were quiescent incipient types, and 11 were quiescent advanced and far advanced. Of these, 11 abortions were induced during the second month, 14 during the third, 3 during the fourth, and 1 during the sixth month. In only one instance was there a relapse as the result of the abortion, and this patient quickly recuperated. Eighteen showed a gain of from 2 to 8 pounds within five weeks afterward; 5 remained stationary, and 6 lost from 1 to 5 pounds. Of the total 8 died, 3 as the result of childbirth. From these cases I formulate the following conclusions:

1. Pregnancy is an etiologic factor to be considered in the tuberculosis problem.
2. During the puerperium the disease shows its greatest activity, although any month of pregnancy may witness its onset.
3. Mortality is greater among women showing their first symptoms during the puerperium than among those showing onset irrespective of pregnancy.
4. Mortality is greater among phthisical women who subsequently pass through labor than among phthisical women in general.
5. A tuberculous woman may conceive during any stage or phase of the disease.
6. Latent, quiescent, or arrested tuberculosis is almost invariably rendered active by a completed pregnancy.
7. Occurring in the course of more or less active tuberculous disease, it almost invariably results in rapid progression, and frequently terminates fatally.
8. Patients should be instructed as to the detrimental results of pregnancy.
9. The offspring of tuberculous women are generally weak and display a strumous diathesis.
10. When a phthisical woman is allowed to complete her pregnancy she should have the benefit of climatic treatment and the child should be separated from the mother at once.
11. Abortion should be performed in every instance when pregnancy is recognized in the early months, since it will enhance the woman's chances of recovery; but in the later months generalization is not feasible; each case must be considered individually.
12. Mortality and percentage of relapses is practically *nil* when abortion is induced before the end of the third month.
13. Premature delivery should not be considered in the later months of pregnancy unless the patient's condition absolutely demands it.
14. Patients apparently cured, having remained without symptoms or signs for at least one year, may be allowed to go to term, but should be under careful supervision.
15. In all patients allowed to complete pregnancy the labor should be terminated rapidly and with as little exertion as possible on the part of the woman.

DISCUSSION

DR. CHARLES JEWETT, Brooklyn: With few exceptions I believe that pregnancy complicated with tuberculosis should be terminated early in the pregnancy and early in the disease if any benefit is to be expected. Intervention is most urgently necessary in cases of laryngeal tuberculosis. With the exception of certain localized processes, tuberculosis is likely to prove a serious complication of pregnancy. In a large proportion of the cases the disease takes on a more active course in the later months and especially is this true of the puerperium. Lactation is also recognized as a danger period, but this can be eliminated readily. The termination of pregnancy in the later months, with the exception of certain grave complications of the disease, or when demanded in the interest of the child, is, as a rule, useless. It is believed by many that premature labor is not so well-borne as spontaneous labor at term. There is, however, a wide difference of opinion on the question of therapeutic abortion in tuberculous women. Nearly half the recent writers are opposed to it at any period and under any condition. While I recognize the difficulty of formulating rules for all cases, I think that, in most instances, at least of beginning tuberculosis, the interest of the mother will best be served by terminating the pregnancy in the first three months.

DR. J. CLIFTON EDGAR: I do not believe that such a large collection of cases has ever before been reported as occurring in the experience of one person. Bossi says that he has only been called on to face this question twenty times. There seems to be a difference of opinion as to the course to pursue in these cases. Pinard, of Paris, observed spontaneous resolution of the tuberculosis during pregnancy. On the other hand, Lancereaux claims that non-hereditary cases of tuberculosis have developed as the result of pregnancy and the lowered vitality which occurs with it. Pinard's statement is in line with the superstition and tradition that exists, that pregnancy has a tendency to better the condition of the tuberculous woman. The latent or cured or directly hereditary cases of tuberculosis are more liable to suffer from the effects of pregnancy than the non-tuberculous. If two-thirds of the incipient cases of tuberculosis can be cured by proper environment and hygiene, why not treat the pregnant patients as one would the non-pregnant? I have always taken the stand that pregnancy complicating tuberculosis is a threat and a menace. It is a good plan to give an easier labor by cutting off one or two weeks of gestation. The labor itself should be made as easy as possible by shortening the second stage with the forceps and by the use of anesthesia combined with oxygen.

Dr Edwin B Cragin: I have taught for several years that it is best to take the radical ground advocated by Dr. Trembley, so far as tuberculosis and early pregnancy are concerned If there is an active tuberculous process, pregnancy should be terminated at once. There are a certain number of cases in the later months of pregnancy where, in the interest of the mother, the life of the child should be sacrificed; I have seen cases in which the women were going down hill rapidly, and in which the additional discomfort of increased pressure and disturbance of respiration was apparently sapping her life. I believe that many of these women could be much *benefited* by inducing labor at eight and a half months, thus lessening the severity of the labor by having a smaller child. While in the early months of pregnancy I make no exception to the advisability of inducing therapeutic abortion in active tuberculosis, in the later months one must use judgment.

Dr James A Miller: I believe that Dr. Trembley's position is a perfectly tenable one. Any patient who goes through with pregnancy is probably going through the hardest kind of work and I believe, therefore, that pregnancy should be interrupted at the earliest possible moment in all patients not able to stand such work There are two classes of cases in which it is difficult to make up one's mind as to what course to pursue: First, the early cases in which the patients are apparently cured; with these I think it would be much safer and better to wait even longer than one year before allowing pregnancy to occur. Second, those cases in which the disease is advanced but has become arrested for a time varying from two to six, or even eight years There are patients in whom the lesions are very advanced and who give marked signs in the chest and yet may go without symptoms for years Such women may go to term safely. When tuberculin is used the patients are less liable to have relapses

Dr Whitbeck: I think the outlook for the child born of tuberculous parents, especially the advanced cases, should be considered more The chances of such a child developing tuberculosis is comparatively large.

Dr S. M. Brickner I should like to offer a suggestion, based on a purely theoretical basis, that during pregnancy the thyroid gland increases in size and it seems possible that the secretion which is poured out during pregnancy has an inhibitive effect on the development of the tuberculosis during pregnancy, and this effect ceases during the puerperium and the pulmonary disease, therefore, is allowed to proceed with its ravages It might be well to give thyroid extract, beginning its use at the ninth month. Brown of Saranac Lake has suggested that induced delivery is called for at or near full term After dilating the cervix sufficiently, forceps is applied and labor terminated as rapidly as possible in order to save the woman as much physical work as possible I am opposed to this procedure because in primiparæ it is a hazardous undertaking; while in a multiparous woman the second stage of labor is usually short and not so much physical work is involved to cause an increase in the pulmonary disease

Dr William S Stone: One of the best papers on this subject has been written by von Rosthorn who does not take the radical position of Dr Trembley. In women who have given evidence of a mild tuberculous process prior to pregnancy, or in those in whom the symptoms show a condition localized within a small pulmonary area, it is possible to individualize, in other words, the decision as to what course to pursue should depend on a careful examination made by a medical man rather than by an obstetrician The worst types of tuberculosis are the laryngeal The cases with hemorrhage are often not the worst types It is important, as von Rosthorn says, to do everything to make labor easy and the suggestion of bringing the labor on one or two weeks earlier is worthy of consideration

Presentation of Cases, Etc.

Dr. S. M. Brickner presented a case of hermaphroditism; Dr R T. Frank showed a specimen of colloidal ovarian tissue; and Dr. LeRoy Brown exhibited an electric light operating equipment.

Medicolegal

A Consultation of Physician

The Supreme Court of Oregon says, in the case of Beard vs Royal Neighbors of America, that the mere fact that a physician *was not* sought out by Mrs Beard, with a view of consulting him as a physician, but instead, was met on the street by Mr. Beard, who advised him of his wife's illness, and directed him to go to the house and attend her, did not prevent *it* from *being* considered a consultation by her with a physician. She approved and adopted the act of her husband as *her own by accepting* the services of the physician, advising him of her symptoms, and receiving aid from him, thereby making the act of her husband *in summoning* the physician her own act, if that were necessary—which the court *thinks* was not—to constitute a consultation of a physician The material part of the facts constituting *consultation*, within the meaning of the contract of insurance under consideration was having an interview with him, acquainting him *with* the nature of the ailment, and accepting and receiving aid, advice, or assistance from him.

Admissible Opinion Evidence

The Supreme Court of Georgia says that in Seaboard Air Line Railway vs Maddox, a suit brought by the latter party for a personal injury, a physician examined the injured party on several occasions On the trial he gave testimony by answers to interrogatories as to the results of his examination, and his opinion in regard to the condition of the plaintiff and of the extent and probable permanent character of the injury. It is held that there was no error in refusing to rule out his entire evidence because on cross examination he stated that his opinion was based both on a personal examination and a report made to him by another physician accompanied by a sciagraph, the witness also stating that the condition of the spine of the person examined was evidently the result of an injury, and that his *opinion* was based on personal examination independent of the sciagraph, and was simply confirmed by it and the report of the other physician

Railroad Company Not Liable for Services Rendered by Surgeon

The Fourth Appellate Division of the Supreme Court of New York had, in the case of Voorhees vs New York Central and Hudson River Railroad Co, a suit brought by a physician to recover the value of services rendered an injured brakeman at a hospital. The plaintiff was first summoned by the superintendent of the hospital, after failure to find the surgeon representing the railroad company or to get the hospital surgeon on duty

By the rules of the hospital it was open to any one suffering from personal injuries If the patient was able to pay, he was charged $1 a day while there There was no hospital charge for physicians or surgeons The authorities never assumed any responsibility for the payment of their services The staff surgeons were not employed by the hospital management Their services were supposed to be rendered gratuitously, although there did not seem to have been any prohibition against the attending surgeons receiving pay from the inmate he treated.

The claim of the plaintiff against the defendant rested on two grounds: (1) On the contract between it and the hospital; (2) that the case was an extraordinary one, imperatively demanding prompt attention, and the defendant was consequently liable, as the injured man was its servant and was taken to the hospital by one of its employés But the only semblance of authority in the hospital superintendent to employ a physician on behalf of the defendant was found in testimony that the claim agent of the defendant asked that the defendant's surgeon be 'notified when a case was admitted" Whether he was to be "notified" in order to report as to the extent of the injuries, or to render medical service was unimportant, for the authority, at most, was limited to summoning him, and did not include any other surgeon

There was no authority given the superintendent to employ physicians to attend employés of the defendant who might be in the hospital.

Nor could any liability be founded on the relation of master and servant existing between the defendant and the injured man. The rule is a general one that the employer is not required to provide medical attendance for his employé unless he has agreed so to do. In a few of the states an exception to this rule has obtained in case of emergency treatment rendered by a physician to an employé, and it has been held that an employé present when the emergency arises may summon a physician on the responsibility of the employer. The exception has not prevailed in New York state, so far as the court's research has extended, and the trend seems to be against this invasion of the general rule. The right to recover medical services to a third person must rest on an express contract, or on facts from which the intention to pay may be inferred. The settlement of the defendant with the injured employé may have been an admission of liability for his injuries. That, however, did not inure to the physician's benefit. His right to recover must be founded on contract, either express or implied.

Opinion Evidence on Germ Diseases Without Postmortem or Microscopic Examinations

The Supreme Court of Minnesota holds, in the case of Mageau, administrator, vs. Great Northern Railway Co., that the opinion of a physician that the death of a person was due to one disease, instead of another, both diseases being caused by the action of germs and manifested by similar external symptoms, based on general observation, without a postmortem or microscopic examination, is too conjectural, theoretical, and uncertain, standing alone, to sustain a verdict.

In this case a married woman received, on September 12, in a railroad accident, certain injuries the immediate result of which was the retroversion of the uterus. Some weeks thereafter she was successfully operated on for this trouble. On February 5 she gave birth to a child. During the interval she had suffered from various troubles, and for some time had been in the hospital, where she was treated for bronchitis. The child had to be removed by means of instruments, and was dead when born. Five days after the birth of the child, the woman, it was claimed, died of peritonitis; and the question was whether the railway accident was the proximate cause of her death. The defense was that her death was caused by septicemia, instead of peritonitis, and that the infection occurred at the time of the child birth. The trial court ordered judgment for the defendant notwithstanding a verdict for the plaintiff, which judgment is here affirmed.

The Supreme Court says that the witnesses agreed that peritonitis and septicemia were due to the activity of germs, but they disagreed as to practically everything else. The plaintiff's experts testified that peritonitis was present almost immediately after the railway accident; but it was all pure conjecture. No postmortem examination was held, and no attempt was made at any time to discover the kind of germs which were at work. The fact that a person is a practicing physician or surgeon generally qualifies him to testify as an expert, but in a matter of this kind the absence of special qualifications on the part of the experts was shown for forming an opinion on these delicate and controverted problems. Expert bacteriologists are not agreed as to such matters and the court doubts whether any of them would be willing to express a definite opinion without having made a microscopic examination.

The mere opinion of a physician on such a matter, expressed without having made a careful, scientific investigation and examination, will not, alone, sustain a verdict. It is too uncertain and conjectural to form the basis for a verdict which results in the transfer of a large amount of the property of one person to another. The court, however, does not mean to say that expert evidence of this character has not probative value, when it is based on facts which are themselves established.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Boston Medical and Surgical Journal

March 4

1 *Renal Diagnosis. C. H. Chetwood, New York.
2 Principles of Mechanotherapy, with Special Reference to the Treatment of Orthopedic Cases. C. H. Bucholz, Boston.
3 The Newer Silver Salts as Compared with Silver Nitrate in Treatment of Ophthalmia Neonatorum. F. E. Cheney, Boston.

1. **Renal Diagnosis.**—Chetwood discusses the rapid development of measures useful in the diagnosis of kidney trouble, and reports a series of illustrative cases. He draws the following conclusions:

> 1. It is by judicious selection and combination of the various available tests that the best results are obtained and the most satisfactory preliminary diagnosis is accomplished in surgical lesions of the kidney.
>
> 2. It is impossible and superfluous to resort to all tests in every instance. Reliable confirmation is what is sought for, as regards, first, the kidney in which the lesion is existing, and, second, the condition of the remaining kidney, especially when nephrectomy is a possibility.
>
> 3. When there is an obvious variation from the normal, simple cystoscopic examination may be sufficient to determine in which kidney the lesion is located; and the indigo carmine or phloridzin test, accompanied by segregation or catheterization of one ureter, will usually furnish the desired information as to the condition of the other kidney.
>
> 4. When the ureter of the unsuspected kidney is normal in appearance and the quantity and quality of the urine it secretes are also normal, and when additional evidence is afforded by the positive result obtained with phloridzin or indigo carmine, there need be no indecision.
>
> 5. When the ureteroscopic picture is uncertain, however, and when the result with phloridzin is likewise uncertain, with a possible unfavorable discrimination as regards one kidney, diagnosis is much more difficult, and it becomes necessary to resort to all of the various methods until a net result is sufficiently decisive to warrant conclusions.
>
> 6. In reaching a decision in obscure cases, it should be remembered that a diseased kidney may exert restraint upon the functional capacity of the opposite organ, especially in the case of phloridzin glycosuria, when by means of the other differential tests a sufficiently definite net result must be sought to justify a satisfactory diagnosis preparatory to operation.
>
> 7. Inasmuch as the progressive development of cystoscopic and functional diagnosis represents so important an element in urological technic, the skillful routine employment of these means is essential to the supremacy of the genitourinary surgeon in this field of surgery.

Medical Record, New York

March 6

4 *The Zoophil Psychosis. C. L. Dana, New York.
5 Dangers Associated with Removal of the Tonsils and Adenoid Growths. F. C. Ard, Plainfield, N. J.
6 *Thymus Enlargement Associated with Nervous Symptoms. O. Lerch, New Orleans.
7 Prevention of Epidemics. M. J. Synnot, Montclair, N. J.
8 Perithelioma of the Carotid Gland. J. Douglas, New York.
9 Retinitis Due Probably to Acute Lead Poisoning. G. W. Vandergrift, New York.
10 Transfusion of Blood for Pernicious Anemia. R. Lucy, Guelph, Ont.

4. **The Zoophil Psychosis.**—Dana describes cases of exaggerated and morbid sensitiveness in respect of animals. He says that so far as the zoophil psychosis is concerned, it shows itself both in (1) fixed and tormenting ideas, and (2) an emotional hypertrophy which carries a naturally noble sentiment to the point of disease. With both states there are morbid fears and worries.

> 1. The fixed idea takes usually the form of a kind of quasi delusion that the animal world is constantly suffering from, or in danger of, the brutality of man. To an extent this is true, but not to such an extent as to lead an individual to acts of oppression and feeling of alarm.
>
> 2. The hypertrophy of affection leads to a continual state of alarm, jealousy and concern for the object beloved, whether it be a baby, a dog or the cause of religion. The psychosis is really the expression of a selfish and weak nature.

6. **Enlarged Thymus.**—Lerch briefly reviews what is known of this organ, and says that the gland can be distinctly and sharply outlined by percussion in adults up to extreme old age. He describes the method of percussing. The symptoms of the enlargement of the thymus are the symptoms of the functional neuroses, hysteria, neurasthenia and visceral neuroses, and probably of the forms of functional insanity, mania, melancholia and paranoia. This is so much the case that from the enlarged gland we can predict the severity of the symptoms and from the symptoms the size of the gland; the more pronounced the symptoms the larger the gland, the flatter the dulness, and *vice versa*. Some symptoms may be

considered almost pathognomonic, the dilated pupils and the rapid pulse, changing from 100 beats in the upright position to 80 or less in the recumbent posture, due evidently to stimulation of the sympathetic nerve and the emptying of the gland in the horizontal position. Enteroptosis with nervous symptoms is almost invariably associated with an enlarged thymus. Some enlargement of the thyroid is sometimes seen and occasionally exophthalmos. The symptoms of exophthalmic goiter resemble the symptoms of thymic enlargement. Tachycardia and tremor are prominent symptoms of both. The pulse is small, the arteries may beat visibly, the heart sounds are loud, and the apex heaving. Irritation and irritability of temper, forgetfulness—or rather loss of attention—coupled with hysterical stigmata and the various visceral disturbances, easy fatigue of body and mind associated with normal muscular strength are often found. Hyperidrosis is frequent. Increased urination and palpitation and disturbances of the stomach and intestines are almost always present. After an application of a high-frequency current for five minutes an enlarged gland will diminish considerably around the margin. Specific medication on the lines of thyroid treatment and surgical interference in severe cases may be tried, and rest and hygienic treatment can be carried out to good purpose. The author believes that this affection is an entity, for which he proposes the name "thymokesis." He reports cases.

New York Medical Journal

March 6

11 Affections of the Oral and Nasal Cavities which are Related to Skin Diseases. J. A. Fordyce, New York.
12 *Need for Medical Censorship of the Lay Press. W. H. Palmer, Providence, R. I.
13 General Paralysis of Unusually Long Duration with Report of two Cases, one with Necropsy. M. J. Karpas, New York.
14 *Alimentary Albuminuria. A. C. Croftan, Chicago.
15 Alcohol—Physiologic Action and Therapeutic Indications. E. R. Zemp, Knoxville, Tenn.
16 A Study of Alcoholism. G. B. Lawson, Roanoke, Va.
17 Attempt at Conservatism in Abdominal Surgery. J. W. Kennedy, Philadelphia.
18 Indications for the Drinking of Mineral Waters in Gastrointestinal Diseases. S. Basch, New York.

12. **Medical Censorship of the Lay Press.**—Palmer gives instances of the abuse by newspapers of medical details of various kinds, and says that as all our great newspapers have their sporting and financial editors why should they not have a medical editor, whose province it should be, not to have a particular department appearing as such in the issues of the paper. but to exercise his discrimination about matters such as his article deals with?

14. **Alimentary Albuminuria.**—Croftan points out that, on account of the inadequacy of chemical and physical methods (before the introduction of the biologic method) to identify the urinary albumin as food albumin. albuminuria following the ingestion of albuminous food was interpreted to signify either that abnormal degradation or putrefaction of albumin had occurred in the intestine causing a toxemia with renal irritation and albuminuria, or, more vaguely, that certain circulatory disturbances in the splanchnic area followed overtaxation of the intestinal proteolytic function, with resulting circulatory changes in the kidneys and albuminuria. While either of these possibilities must be taken into consideration, there remains a form of alimentary albuminuria corresponding in a sense to alimentary glycosuria, in which neither of these factors is operative, but in which actually the albumin of the food as such reappears within a short time in the urine. The disorders. therefore, in which alimentary albuminuria according to Croftan's experience, is most apt to occur are: First, motor insufficiency of the stomach of advanced degree particularly if combined with secretory depression (hypochlorhydria and hypochylia). In achylia gastrica combined with motor insufficiency, this form of albuminuria is particularly common. Second, in diarrheic disorders of all kinds and particularly in cases of pancreatic debility with accompanying intestinal dystrypsia. Third, in hepatic insufficiency of various origin. Fourth, after the ingestion of abnormally large quantites of albumin (noted especially in diabetics on a meat-fat diet) and in cases in which large quantities of albuminous food, particularly egg albumin, are injected into the rectum in the form of nutritive enemata. The treatment of this form of albuminuria is exclusively causal, i. e., consists in the correction of the above-indicated morbid states. The comparative frequency of this form of albuminuria should be appreciated. It is essential to recognize that there is a form of albuminuria of rather favorable prognosis that is not primarily due to renal debility, or to nephritis, or to circulatory disturbances in the kidneys as a part phenomenon of general cardiovascular disease (Bright's disease, arteriosclerosis), but that is enterogenous in type and primarily and exclusively a gastrointestinal and hepatic disorder.

Lancet-Clinic, Cincinnati

March 6

19 Postoperative Nasal Hemorrhage. E. Pynchon, Chicago.
20 Interesting Case of Pulmonary Tuberculosis. S. G. Bonney, Denver, Colo.
21 *Problem of Relapse after Apparent Cure in Treatment of Pulmonary Tuberculosis. C. L. Minor, Asheville, N. C.
22 Renal Calculi. D. N. Eisendrath, Chicago.

21. **Relapse in Pulmonary Tuberculosis.**—Minor divides the causes for relapse into those operating through the patient and those for which the physician is responsible. With regard to the first are to be noted: (1) The patient's character—lack of will power, intelligence, purpose, or self-control; (2) certain infectious diseases—grip, measles, typhoid—which are apt to reawaken an incapsulated process; (3) the patient's mode of life, overexertion, underfeeding, unwise diet, dissipation and sanitary surroundings. The causes due to the physician are lack of capacity to train and to teach the patient automatically to do the right thing, and in general, absence of the power to impress and dominate the patient; and too early dismissal of the case. He also cautions against undue reliance on the tuberculin treatment, which, however valuable it may be, can never make up for the necessary hygienic treatment and the thorough teaching of the patient.

Surgery, Gynecology and Obstetrics, Chicago

February

23 *Modern Military Surgery. N. Senn, Chicago.
24 *Immediate Operative Treatment of Certain Fractures. L. Freeman, Denver, Colo.
25 *Tenosynovitis of the Hand (concluded). A. B. Kanavel, Chicago.
26 Remote Results of Implantation of the Ureters into the Bowel for Exstrophy. J. J. Buchanan, Pittsburg, Pa.
27 Localized Necrosis of the Liver. J. A. Hartwell, New York.
28 Tuberculosis of the Cecum. R. O. Rogers, Richmond, Va.
29 Traumatic Subluxation of the Head of the Humerus. R. Russ, San Francisco.
30 Submucous Perineorrhaphy for Complete and Incomplete Lacerations. C. A. Hall, Cleveland, O.
31 Indications for and Technic of Vaginal Cesarean Section. R. Peterson, Ann Arbor.
32 Trolley Treatment in Spondylitis and Locomotor Ataxia. A. C. Wiener, Chicago.

23. **Modern Military Surgery.**—In this posthumous article by the late Dr. Senn, are discussed the recent improvements of firearms, recent experimental studies on gunshot wounds, the character of wounds inflicted by the small caliber mantled bullet, and the principles which govern the modern treatment of gunshot wounds.

24. **Operative Treatment of Fractures.**—Freeman discusses the following propositions:

1. No recent fracture should be operated on that can be successfully treated by other means.
2. No recent fracture should be operated on except under the most favorable surroundings, and by an experienced surgeon who is a master of aseptic technic.
3. The resisting powers of the patient should be taken into careful consideration.
4. The patient's position and duties in life deserve attention.
5. The success of operative intervention depends much on the accessibility of the fracture—the danger varying directly with the amount of manipulation required.
6. It should be recognized that faulty alignment and overlapping of fragments, or even the presence of visible deformity, do not always mean disturbance of function.
7. In estimating the value of an operation the after-treatment deserves consideration: will it be rendered less trying to the patient or give a better result in a shorter space of time?
8. The indications for operation vary greatly with the particular bone which is broken, the character of the break, and its situation in the bone.
9. Admitting the desirability of operating in certain carefully selected cases, it must not be forgotten that there are two important drawbacks—delayed union and sepsis.

Freeman describes the operative technic.

25 **Tenosynovitis of the Hand.**—Kanavel continues his discussion of this subject from the last issue with a consideration of treatment. He summarizes his views as follows:

> Success in the treatment of tendon sheath infections of the hand depends on early accurate diagnosis on incisions so made as to drain the proper sites without involving uninfected areas, and on careful after-treatment
>
> Two types must be recognized, the fulminating and the subacute The treatment will vary with the type The most marked symptoms and signs are: Localized excruciating pain over the course of the sheath, pain on extension, especially at the proximal end of the sheath, and characteristic position of the finger
>
> Infection from the tendon sheath of the index finger will most often extend to the proximal interphalangeal thenar space, lumbrical spaces, and the surface at the proximal end of the sheath
>
> From the middle finger it most often extends to the proximal interphalangeal joint, the lumbrical spaces, the surface at the proximal end, and the middle palmar space, although it may invade the thenar space
>
> From the ring finger the extensions are the same, except that it always involves the middle palmar space if extension takes place into the palm
>
> From the little finger, the most common sites of extension are to the proximal interphalangeal joint (not common), the lumbrical space, the middle palmar space, the surface at the proximal end of the sheath, and the ulnar bursa From the ulnar bursa it may extend to the middle palmar space, radial bursa, interosseous space below the flexor profundus and the wrist joint.
>
> From the sheath the flexor longus pollicis to the thenar space, ulnar bursa, wrist joint, and interosseous space above described
>
> Incisions are best made in the fingers, either on one or both sides of the tendon sheath, over the length of the shaft of the middle and proximal phalanx, avoiding the joints, and into the proximal end of the sheaths or the lumbrical spaces to provide drainage there
>
> The ulnar bursa is best treated by splitting it throughout its length, cutting on the ulnar side The anterior annular ligament should generally be cut This is commonly supplemented by incisions on the radial and ulnar sides of the forearm above the wrist joint, and on the level with the flexor surface of the bones—through and through drainage is then carried out under the flexor profundus tendons An ulnar incision may be sufficient If the pus has invaded the forearm an ulnar incision is made at the middle of the forearm between the flexor carpi ulnaris and the flexor sublimis, or between the flexor carpi ulnaris and the ulna
>
> Incision of the flexor longus pollicis sheath is made from a finger breadth below the anterior annular ligament to the end of the sheath Opening may be made above the anterior annular ligament, the upper half of which may be cut or drainage may be instituted above the wrist by the lateral incision mentioned under ulnar bursal infections
>
> In the after treatment the Bier constrictor is used for from 24 to 48 hours, hot moist dressings for from 2 to 4 days, followed by dry dressings, the hand being held in over extension by a splint, and daily manipulation of joints and muscles practiced after immediate danger of systemic infection has ended.

Annals of Surgery, Philadelphia

February

33 Intestinal Obstruction Due to Volvulus or Adhesions of the Sigmoid Colon J C Bloodgood Baltimore
34 *Value of the Cammidge Reaction in Diagnosis of Pancreatic Disease E H Goodman Philadelphia
35 Prevention of Intestinal Obstruction Following Operation for Appendicitis F Hawkes New York
36 Accidents in Hernia Operations J F Erdmann, New York
37 New Cystoscope for Catheterizing the Ureters by the Indirect Method P M Pilcher Brooklyn
38 New Indirect Irrigating Observation and Double Catheterizing Cystoscope L Buerger New York
39 Complete Denudation of the Penis C A Powers, Denver, Colo
40 Operative Technic of Carcinoma of the Penis. J. H. Nicoll, Glasgow Scot
41 *Carbolic Acid Gangrene of the Finger J A Kelly

34 Published in *American Journal of Medical Sciences* for January, 1909

41. **Carbolic-Acid Gangrene.**—Kelly reports, from the Polyclinic Hospital, a case of carbolic acid gangrene of the finger. A woman, aged 27, applied a solution of carbolic acid (strength unknown) to a punctured wound of the finger. The dressing remained in place from 11 p m till 4 a. m, when it was removed on account of intense pain Kelly advised the patient to have the finger amputated, but she refused. Subsequently she went to another hospital, where the finger was amputated at the metatarsophalangeal joint. He declares that it is surprising that more cases of this kind do not occur, considering the ease with which carbolic acid may be procured and its common use by the laity.

American Journal of Medical Sciences, Philadelphia

February

42 *Gastric Neuroses J B Deaver, Philadelphia
43 *Treatment of Chronic Bronchitis F Forchheimer, Cincinnati, O.
44 *Open Air and Hyperemic Treatment as Powerful Aids in Management of Complicated Surgical Tuberculosis in Adults W Meyer, New York
45 The Heart in Pulmonary Tuberculosis (continued). L Brown, Saranac Lake, N. Y.
46 **Bacillus Coli Communis*. Cause of an Infection Clinically Identical with Typhoid Fever W Coleman and T W. Hastings New York
47 Acute Syphilitic Diseases of Spinal Cord J Collins and C G Taylor, New York
48 *Habitual or Recurrent Anterior Dislocation of Shoulder. T. T Turner Philadelphia
49 Clinical Forms of Pyelonephritis D N Eisendrath, Chicago.
50 Operative Treatment of Deflections of the Nasal Septum C. W Richardson, Washington, D C
51 Further Report of a Case of Tracheal Scleroma E Mayer, New York
52 Presence of Tubercle Bacilli in Circulating Blood in Tuberculosis R C. Rosenberger, Philadelphia

42 **Gastric Neuroses.**—Deaver discusses particularly that set of gastric symptoms classed grossly as nervous dyspepsia. There are certain disturbances in the gastric function, motor, secretory and sensory, for which the minutest examination discovers no organic basis Further, they may be classed as conditions of irritation or depression. It may be stated as a fundamental principle that a gastric neurosis without other neurasthenic condition is very rare, and a true gastric neurosis will be found to be one of a train affecting diverse functions and widely separated organs The author discusses the many organic conditions that are liable to be mistaken for gastric neuroses, among others gastric ulcer, carcinoma in the early stage, gallstones, appendicular trouble, etc. But it must be admitted that there are cases for which the term nervous dyspepsia suffices as a diagnosis, when all possible organic conditions have been eliminated, and in such cases Deaver strongly deprecates any surgical interference. There is no exception, perhaps, to the general statement that gastric neuroses *per se* are not in the province of the surgeon.

43. **Chronic Bronchitis.**—Forchheimer says that causal treatment does not receive sufficient consideration in chronic bronchitis, due to the fact that its etiology is very complex and not always discoverable He describes the local and remote causes and discusses the subject of catching cold and the method of 'hardening." A patient with bronchitic tendencies is always in a state of insufficient resistance to bacterial invasion and should as much as possible be kept away from exposure to infection. Autoinfection is more common than is supposed. He discusses the methods of removing bacteria from the bronchial mucous membrane, the effect of diseased lymphatics on chronic bronchitis and the nature of climatic treatment He emphasizes the importance of the removal of secretion and describes the various classes of remedies employed therefor The remedies are divided into those that act by increasing fluidification of the expectoration, by rousing irritation so that increased efforts are made for its proportion, and by drying up the secretion. In chronic bronchitis it is rarely necessary to employ the second of these three kinds. Of the first group the author prefers ammonium chlorid, ipecac, the alkalies and pilocarpin; of the last group, turpentine, benzoates, creosote and its preparations or derivatives, eucalyptus and tar. The same effects follow inhalations as are produced by medicines. Intratracheal injection seems to be followed by good results In ordinary cases postural treatment is best for the removal of secretion from the bronchial tubes. He discusses the subject of postural treatment at length. Heroin may be tried in small doses (0.004 to 0 008 gram, 1/16 to ⅛ grain), but it is more toxic than morphin and heroinism does occur. He discusses mineral waters in relation to bronchitis, and endorses Knopf's teaching in regard to proper training in breathing in this condition.

44. Abstracted in THE JOURNAL, Oct 31, 1908, p. 1540

46. **Bacillus Coli Communis in Typhoid.**—Coleman and Hastings report instances in which cases apparently of clinical typhoid fever appear as the result of blood examination to be due to the colon bacillus. They draw the following conclusions:

> 1 Isolated reactions against *B coli communis* are without significance in respect to the cause of infection
>
> 2 The blood serum in a case of infection by *B coli communis* may contain agglutinins for certain strains of this group while the infection persists, and not on the patient's return to health
>
> 3 The detection of an increment of agglutinins in the blood serum for a particular strain of *B. coli communis* is evidence of a local or general infection with that strain
>
> 4 Some strains of *B. coli communis* are capable of causing a disease clinically identical with typhoid fever.

48. **Anterior Dislocation of the Shoulder.**—Thomas discusses this subject well, and as a result comes to the conclusion that the usual anterior, habitual or recurrent dislocation of the shoulder is due to a traumatic, cicatricial, anterior, hernial pouch of the capsule, and that the object of the operation should be to obliterate the hernial protrusion. It would be a simple matter to remove at the same time any free or attached joint body that might be present.

Albany Medical Annals

February

53 What a City Can do to Combat Tuberculosis. J. H. Pryor, Buffalo, N. Y.
54 Favorable Aspects of the Medical Treatment of Pulmonary Tuberculosis. S. B. Ward, Albany.
55 The Tuberculosis Dispensary. A. T. Laird, Albany.
56 How Dangerous is the Consumptive? D. C. Twitchell, Saranac Lake, N. Y.
57 Points Regarding the Diagnosis of Incipient Pulmonary Tuberculosis. A. T. Laird, Albany.
58 Health as a Science. A. Holding, Albany.

Yale Medical Journal, New Haven

February

59 *Hypersusceptibility to Tuberculin in Tuberculosis: Its Physiologic and Clinical Importance. E. R. Baldwin, Saranac Lake, N. Y.
60 *Deformities of Feeble-Minded Children. E. H. Arnold, New Haven, Conn.
61 Report of Four Unusual Cases of Peripheral Venous Thrombosis. G. Blumer, New Haven, Conn.
62 Family Periodic Paralysis. M. Mailhouse, New Haven, Conn.
63 *Acute Pleurisy with Effusion. N. A. Pomeroy, Waterbury, Conn.

59. This article is discussed editorially in The Journal, this issue.

60. **Feeble-Minded Children.**—Arnold discusses the interrelations of mental deficiency and physical deformity, and expresses his conviction that there is a well-defined relation between mentality and habitual deformity that has grown stronger from day to day. Without neglecting surgical or mechanical means for the relief of these deformities, he has paid more and more attention to the educational feature of the treatment. In cases just beginning, and of lesser degree, he finds these measures often suffice. In the cases in which the deformity has lasted a sufficiently long time, and progressed to a degree where contracture of the soft parts and structural changes of the bone have taken place, he has found that educational means supplement mechanical and surgical treatment in a most favorable manner, fortifying him in the position gained by the former. So far as the effect of such treatment on these feeble-minded children is concerned, a great many of them have on their records the remark "motor improvement," which in many cases is synonymous with staying the progress of the deformity, or even improving it. It goes without saying that the inter-relationship of mentality and motor function being so close, improvement in motor function practically always assures improvement in mentality.

63. Abstracted in The Journal, July 25, 1909, p. 339.

American Journal of Urology, New York

February

64 Diagnosis and Treatment of Bilateral Nephrolithiasis. M. Krotoszyner, San Francisco.
65 Serodiagnosis of Syphilis. G A. de S. Saxe, New York.
66 Study of 329 Cases of Gonorrhea in the Male, with Particular Reference to the Therapeutic Value of Arhovin. A. L. Wolbarst, New York.
67 Glass Drainage Tubes in Prostatic Surgery. F. Cabot, New York.

Journal of Cutaneous Diseases, New York

February

[illegible] Parapsoriasis: A Resistant Maculopapular Scaly Erythrodermia. W. T. Corlett, Cleveland, O.
[illegible]onic Persistent Edema of the Face; Elephantiasis: Ele[illegible]antiasis Following Dropsy; Result of Excessive X-ray [illegible]age in Treatment of Acne; Mycosis Fungoides. B. Fos[illegible] St. Paul.

[illegible]terstate Medical Journal, St. Louis

February

[illegible]orm of Multiple Sclerosis. W. G. Spiller and A. [illegible] Philadelphia.
[illegible]y Case. H. Tuholske and W. M. Robertson, St. [illegible]
[illegible]ces in Treatment of Uterine Cancer: With a [illegible] Cases and 27 Operations. F. J. Taussig, St. [illegible]
[illegible]ith. G. F. Lydston, Chicago.
74 Value of Conservatism in Pelvic Surgery when Dealing with Pyosalpinx. G. A. Beedle, Kansas City, Mo.
75 Apparatus Used by the Greeks and Romans in the Setting of Fractures and the Reduction of Dislocations (continued). J. S. Milne, Hartlepool, Eng.

70. **Syphilitic Multiple Sclerosis.**—Spiller and Woods discuss the pathologic aspect of the study, and endeavor to show that syphilis may cause sclerotic patches in the central nervous system, resembling the degeneration of multiple sclerosis, without necessarily producing the symptoms of the latter disease. They describe a case in point and formulate the following conclusions: Syphilis in rare instances may produce a symptomatology indistinguishable from that of typical multiple sclerosis, and this without the formation of sclerotic plaques, but by the ordinary lesions of syphilis, viz., arteritis and meningitis. Syphilis may produce sclerotic plaques in the spinal cord resembling those of multiple sclerosis, without producing the typical symptoms of this disease. These plaques have not the sharp definition seen in most cases of typical multiple sclerosis, and yet multiple sclerosis may exist without plaques sharply defined from the normal tissue. The syphilitic form of multiple sclerosis presents round-cell infiltration of the pia and thickening of the blood vessels. Thickened vessels with a small amount of perivascular sclerosis will usually be found in certain regions without the formation of plaques, though plaques may be present at other levels of the cord. In some places, slight neuroglia proliferation without thickened vessels may be detected, resembling in no way true plaque formation, but appearing more in the nature of slight diffuse secondary degeneration. Gumma also may occur in the brain. Secondary degeneration is more common in the syphilitic type, but does occur rarely in multiple sclerosis. Nerve fibers are not always completely degenerated in the syphilitic plaques. Careful and thorough examination will almost always, if not always, make a diagnosis possible between the lesions of syphilis and those of multiple sclerosis, even though they may have a decided superficial resemblance.

72. **Uterine Cancer.**—Taussig reviews forty-one cases with twenty-seven operations. He pays special attention in taking the history, to the following points: First of all, how long an interval elapsed between the onset of the first symptoms and the date of the first consultation? Secondly, how many doctors failed to examine the patients at such consultation? Thirdly, how many have failed to recommend immediate radical operation? He finds that ten out of thirty-two women concerning whom accurate data are at hand can, to a large extent, attribute their death to the neglect or ignorance of the attending physician, and reports by contrast one case which, owing to prompt examination of the physician, the performance of radical panhysterectomy while the disease was still in a superficial state, is likely to lead to cure. He summarizes his remarks as follows:

> The blame for the late recognition of uterine cancer rests mostly on the woman herself. In about 90 per cent. of the cases she did not at once consult a physician. In about one-third of the cases the carelessness and ignorance of the physician was partly or wholly responsible for the delay.
>
> Only about 20 per cent. of his cases were operable.
>
> The cystoscope is a valuable aid in determining the question of operability.
>
> The radical panhysterectomy of Wertheim is the best operation for cervical cancer, except in fat women.
>
> Ureteral fistula due to necrosis will usually heal spontaneously.
>
> Postoperative cystitis can usually be prevented by getting patients up early.
>
> Of palliative methods the best, as tested in fourteen cases, is the acetone treatment after excochleation.
>
> Ureteral compression in the late stages sometimes necessitates operative relief.
>
> Death occurs on an average about one year and seven months after the onset of first symptoms.
>
> The autopsies show the most frequent cause of death to be uremia due to ureteral compression.

Texas State Journal of Medicine, Fort Worth

February

76 Causes of Biliary Obstruction. J. E. Thompson, Galveston.
77 Hysteria—An Inquiry into Its True Nature. M. Holliday, Austin.
78 Radical Operation for Inguinal Hernia. E. J. Hamilton, Houston.
79 Puerperal Infection. J. H. McCracken, Mineral Wells.
80 Bier's Hyperemic Treatment of Wounds and Acute Infections. S. E. Hudson, Austin.
81 Prognostic Value of the Blood Count. C. M. Siever, Alvord.
82 Differential Diagnosis in Malingery. J. S. Turner, Fort Worth.

Montreal Medical Journal

February

83 Ulceration of the Cornea. S. H. McKee, Montreal.
84 Pyelonephritis as a Complication of Pregnancy and the Puerperal Period. D. J. Evans, Montreal.
85 Tumor of the Temporosphenoidal Lobe and "Dreamy States." C. K. Russell, Montreal.
86 Paralysis of the Left Recurrent Laryngeal Nerve in Mitral-Valve Disease. W. Osler, Oxford, Eng.
87 Pulmonary Gangrene and Abscess. G. E. Armstrong, Montreal.

Journal Missouri State Medical Association, St. Louis

January

88 *Lupus Erythematosus. J. P. Kanoky, Kansas City.
89 *Danger of Permitting Warts and Moles to Grow Lest They Become Malignant E. A. Babler, St. Louis.
90 Ways and Means to Overcome the Practice of Prescribing Ready-Made Remedies and Proprietaries. L. E. Sayre, Kansas City, Kans.
91 Conservatism in Medicine. W. L. Brosius, Gallatin.
92 Appendicitis. W. S. Shirk, Kansas City.
93 Primary Cholecystitis from Typhoid Infection. J. D. Brummall, Salisbury.
94 Report of Seven Cases of Vaginal Cesarean Section. J. G. Sheldon, Kansas City.
95 Accidental Vaccination Ophthalmia. A. E. Derwent, Clinton.
96 Echinacea Angustifolia. J. W. Clark, Cartersville.

88. **Lupus Erythematosus.**—Kanoky says that the iodin-quinin or iodin salicin method of treatment, while not infallible, gives excellent results, in a considerable percentage of cases of lupus erythematosus, *especially if employed early in the disease.* In those cases where the pathologic condition has been present for many years, these agents will often times have to be supplemented by more vigorous measures, he suggests the following as cleanly, efficient, cheap and easily obtained:

℞.	gm. or c.c.	
Acidi salicylici	40	ʒx
Acidi pyrogallici	40	or ʒiiss
Collodii	100	ʒiii

M. et sig.: Shake and apply at night with a camel's hair brush.

89. **Warts and Moles.**—Babler reports 25 cases of warts and moles, the history of which he considers warrants the following conclusions:

1. Warts and moles, especially when situated in exposed parts of the body or when subjected to frequent irritation, should be excised as soon as possible, *lest they become malignant and destroy the life of the individual*
2. Just as soon as a wart or mole begins rapidly to increase in size, it is almost always already a malignant growth.
3. The secret of success lies in the excision of the blemish before malignant changes manifest themselves.
4. When a wart or mole shows evidence of malignant change, the only hope of success in the treatment lies in excision of all the diseased tissues. "Recurrence" signifies failure to remove the whole of the diseased tissues at the primary operation.

Denver Medical Times and Utah Medical Journal

February

97 The Malingerer. R. G. Walker, Denver, Colo.
98 Treatment of Birth Marks with Carbon Dioxid Snow. F. E. Waxham, Denver.
99 Anesthesia. E. Stuver, Fort Collins, Colo.
100 Obstetric Monstrosities. W. R. Calderwood, Salt Lake City, Utah.
101 Tick or Rocky Mountain Spotted Fever. R. A. Pearse, Brigham City, Utah.

Colorado Medicine, Denver

February

102 Plea for Ethical Prescribing. C. M. Ford, Denver.
103 Present Status of Serotherapy. E A. Whitmore, Leadville.
104 Acute Articular Rheumatism. W. W. Wilkinson, Silverton.
105 Earache and Its Consequences. J. A. Patterson, Colorado Springs.
106 Should We All be Specialists? W. A. Kickland, *Fort Collins.*

Medical Herald, St. Joseph, Mo.

February

107 *Mechanical Factors in Cold Taking and Their Therapeutic Interpretations D. C. Hilton, Lincoln, Nebr.
108 Tuberculosis of the Larynx. E. H. Cary, Dallas, Tex.
109 Dacryoblennorrhea and Dacryocystitis with Special Reference to Nomenclature and Recent Developments in the Treatment of Lachrymal Sac Diseases. L. Haynes Buxton, Oklahoma City.
110 Treatment of Lobar Pneumonia in Children L. C. Davis, South Milwaukee, Wis.
111 The Opsonic-Index Theory in Relation to Infective Processes. W. H. Birchmore, Brooklyn, N. Y.

107. **Taking Cold.**—Hilton discusses the anatomic peculiarities of the nasal cavity, and says that their pathologic importance in relation to taking cold is that of *obstruction to* drainage and less frequently to aëration. The conception of *the nasal apparatus as a passage—duct, tube*—is extremely inadequate if not erroneous. This misconception of nasal morphology goes hand in hand with a mistaken notion of nasal physiology, namely, that the functions of the nasal apparatus are quantitative aëration and olfaction. The term nasal passages should be limited to the anterior and posterior nares, i. e., to the distal and proximal communications of the nasal cavities. *The idea that this elaborate mechanism is merely an air passage partly subserving for olfaction* leads to misapplied or abortive therapeutics. Cold-taking, from a mechanical point of view, is merely an incident in the history of a poorly drained nasal apparatus. He discusses the various measures for re-establishing drainage, and insists that mere topical applications, sprays, etc., are simply palliative, *and should be restricted to that end.* The permanent re-establishment of adequate drainage includes (1) chemical cautery; (2) actual cautery and galvanocautery; (3) electrolysis (submucous, unipolar and bipolar); (4) incisions, resections, exsections; (5) écrasement; (6) torsion; (7) dilatation—splints, tents, instruments, *dilators,* etc.

Ohio State Medical Journal, Columbus

February

112 *Present Status of the Radical Mastoid Operation for the Cure of Chronic Purulent Otitis Media. W. C. Phillips, New York.
113 Plea for Enforced Examination of Backward School Children and for Treatment of Remedial Conditions. C. A. Hough, Lebanon.
114 Seminal Vesiculitis versus Appendicitis. T. G. Youmans, Columbus
115 Oidio-Mycosis, with Reference to Dermatitis Coccidioides. A Ravogli, Cincinnati.
116 Normal Labor. W. H. Woodworth, Delaware.
117 Non-Operative Treatment of Squint. C. Lukens, Toledo.
118 Operative Treatment of Squint. C. F. Clark, Columbus.

112. Published in the *Medical Record,* Oct. 10, 1908.

Vermont Medical Monthly, Burlington

February

119 *Surgical Aspect of Inflammation of the Biliary Tract, Whether Accompanied or not by Gallstone. H. C. Tinkham, Burlington, Vt.
120 Value of a Urinary Analysis of the Mixed Urine in Diseases of the Urinary Tract. W. W. Townsend, Rutland, Vt.
121 Differential Diagnosis of Cerebral Hemorrhage and Cerebral Embolism. G. S. Bidwell, Waterbury, Vt.

119. **Inflammation of the Biliary Tract.**—Tinkham thinks that even yet the importance of surgical intervention in inflammatory diseases of the biliary tract, save when the existence of biliary calculus is reasonably certain, is not *sufficiently recognized by general practitioners.* He reviews the anatomy and physiology of the region, describes the course of infection from the intestinal canal, and discusses the morbid conditions thus arising. He concludes that diseases of the biliary tract are the results of infection, which, in a very large majority of cases, comes from the intestinal canal. All medical treatment directed either to the relief of the inflammatory *condition or to the* removal of organic results of inflammation has been most diappointing, and we must look to surgical treatment for the relief of this condition. Early surgical intervention is indicated. The mortality of early operations is very much less, the *permanence of the cure is greater,* and the danger of serious *sequelæ is minimized. The danger to the patient is greater* in delaying operation in cholecystitis or cholelithiasis than the danger of an early operation.

Iowa Medical Journal, Des Moines

January

122 *Tuberculosis in Cattle and Swine in the State of Iowa. J. W. Kime, Fort Dodge.
123 Our Profession Needs to Revolutionize Its Business Methods. W L. Allen, Davenport.

February

124 Conservative Treatment of Chronic Suppurative Otitis Media. H B. Gratiot, Dubuque.
125 Value of Operative Measures in Chronic Purulent Otitis Media. F. E. V. Shore, Des Moines.
126 *An Unusual Case of Mastoid Abscess. W. J. Bussey, Sioux City
127 Respiratory Obstruction in Children. A. W. Elmer, Davenport.
128 Asthma in Relation to Nasal and Accessory Sinus Conditions. E. R. Lewis, Dubuque.

129 Foreign Body in the Larynx Causing Death A R. Schier, Glenwood
130 Plea for More Careful Postmortem Work in Iowa *Autopsies as They are Conducted in Iowa Today* H J H Hoeve, Des Moines
131 Attitude of the Medical Practitioner Toward the *Empiric* W B Kirby, Marshalltown

122. **Bovine and Swine Tuberculosis in Iowa.**—Kime discusses the prevalence, extent, and financial aspects of this subject. He describes the mode of transmission, discusses the identity of bovine and human tuberculosis, admitting the transmissibility of tuberculosis from cow to man, claims the saving of 7,000 infant lives, as a result of the cleaning up of herds during the past eight years, and discusses the method of dealing with the disease. He suggests state legislation prohibiting the sale of milk or cream in Iowa, except from healthy cows. He is opposed to all talk of compensation, for this will stop everything, not a wheel will turn till the money is in sight. We cannot compensate for a part of the animals and not for all of them, or those not compensated will naturally and properly object. It is impossible to talk of paying for the million dollars' worth of diseased cattle in Iowa.

126. *Mastoid Abscess.*—Bussey collects from the literature 13 cases of mastoid abscess of very irregular symptomatology, and adds thereto a case of his own, showing the following remarkable points:

1 The absence of well-marked and definite pain in the ear or in the region of the mastoid
2 No history of discharge from the ear
3 The drainage of the pus through the Eustachian tube, without perforation of the tympanic membrane and the normal appearance of the latter
4 The absence of tenderness over the antrum or mastoid
5 The unusual point at which the pus made its appearance under the periosteum

Chicago Medical Recorder

February

132 New Flap in the Radical Operation on the Accessory Sinuses C M Robertson, Chicago
133 *Acute Traumatic Tetanus Treated by Magnesium Sulphate A. P. Heineck, Chicago
134 Twenty Cases of Staphylococcus Infection Treated with Killed Staphylococci A C Soper, Chicago
135 *Present Status of the Leprosy Problem in Hawaii W R. Brinckerhoff, Hawaii
136 *Some Laws of Heredity. W E Castle, New Haven, Conn
137 Studies of Inheritance in the Evening Primrose. R R Gates, *Chicago.*

133. Published in *Surgery, Gynecology and Obstetrics,* January, 1909

135. This article was discussed editorially in The Journal, Jan. 23, 1909.

136. **Heredity.**—Castle sums up his conclusions by saying that in all forms of inheritance alike, each parent makes, as regards every separately heritable character, a unit contribution to the offspring. Consequently the offspring are as regards every character, two fold, or dual organisms. When the offspring in turn reproduce, they transmit the conditions which they received from their parents; they transmit those conditions separately in alternative inheritance, blended in blending inheritance, and partially blended in other forms of inheritance.

Dominion Medical Monthly, Toronto

February

138 Calculus of Ureter Removed *per Vaginum* W McKeown, Toronto.
139 Vaccination G Elliot, Toronto

Alabama Medical Journal, Birmingham

February

140 *Herniotomy Without Buried Sutures E M Prince, Birmingham
141 Dacryocystitis S L Ledbetter, Birmingham, Ala
142 General *and Dietetic* Treatment of Diabetes J A. Moore, Birmingham
143 Case of Erysipelas with Many Complications which Resulted Fatally. Z B Chamblee, Birmingham

140. **Herniotomy.**—Prince presents an operation suggested to him by the constant anticipation of suppuration in the wound from buried suture material. What is claimed as a novel point is the manner of placing the sutures and the utilization of the fascia. An incision an inch and a half is made above Poupart's ligament down to the fascia of the external oblique The external ring is located and an incision through the external oblique is made on a grooved director passed into the external ring, so that the reflected portion of the external oblique above Poupart's ligament will be sufficient to cover the cord. The sac is dealt with in the usual way. The fascia of the external oblique is then dissected up from the internal oblique until its edge can be easily brought down to the edge of the internal oblique and transversalis muscles. Both ends of a suture of strong silkworm gut are threaded in a needle. Each needle is passed through the transversalis and internal oblique muscles, both emerging through fascia of the external oblique. Both needles are now passed under the cord. One needle is passed below, the other above Poupart's ligament to the skin surface. These sutures are then tied over a piece of rubber tubing or a roll of gauze, which brings the two muscles and fascia of the external oblique in contact with Poupart's ligament. This transplants the cord on top of the fascia of the external oblique

A slit is then made in the fascia of the external oblique to receive the reflected portion of fascia, which is turned back to expose Poupart's ligament. This reflected portion of external oblique fascia is then pulled into the slit, and acts as a covering of the cord. When these sutures are tied the wound is completely closed. They may be made to come out above the wound and tied over a roll of gauze, like the deep sutures, and the wound is then closed by a subcuticular stitch.

After completion we have over the weak spot, or what was the hernial opening, skin, subcutaneous fat, fascia of external oblique, cord, fascia of external oblique again, internal oblique and transversalis muscles and peritoneum. We have no buried sutures from which to fear infection, and there is a stronger abdominal wall than normal The stitches are usually left in for twelve days.

Long Island Medical Journal, Brooklyn

February

144 **Importance of the X Ray in the Treatment of Fractures* J P Warbasse, Brooklyn
145 Treatment of Congenital Talipes Equinovarus J C Rushmore, Brooklyn
146 Occlusion of the Mesenteric Vessels E A Parker, Brooklyn
147 Surgery *of the Bile Passages with Special Reference to the* End Results J C Munro

144. A similar article by this author appeared in The Journal, March 13, 1909, p 857.

St. Louis Medical Review

February

148 **Carbolic Acid Gangrene* W E Leighton, St Louis
149 Gonorrheal Paraurethritis Causing Frequent Autoinfection J L Boehm, St Louis
150 Frequency of Abortion F J Taussig, St Louis
151 Hypertrophic Spinal Arthritis A O'Reilly, St Louis

148. **Carbolic-Acid Gangrene.**—Leighton condemns the sale of carbolic acid to the public, warns the physicians who use carbolic acid in the form of moist compresses that unpleasant results not unfrequently follow its use, and suggests a new factor, possibly two, in the production of carbolic acid gangrene of the fingers and toes He cites four cases of carbolic-acid gangrene and presents the two following factors as hitherto unrecognized ones:

1. The mechanical constriction to the circulation due to the contracted and hardened skin, which acts like a tight bandage applied to the part.
2 The possibility of a sclerotic artery, which is not uncommon in the young, playing a part in some of these cases, as it undoubtedly did in the case which he describes

American Journal of Surgery, New York

February

153 Movable Kidney E L Bell Plymouth, N H
154 Pulmonary Embolism After Injections of Mercury—Salicylate Suspensions W S Gottheil, New York
155 Borderline Cases in Medicine and Surgery. C. C. Allison, *Omaha, Neb*

156 Modified Operation for Ingrowing Toenail. A. M. Lesser, New York.
157 Acute Mastoiditis, Complicated by Sigmoid Sinus Thrombosis, Extradural Abscess, Encephalitis and Meningitis—Operation—Recovery. S. Oppenheimer, New York.
158 Submucous Resection of Nasal Septum: Need of More Conservatism in Selection of Cases. Technic of Operation. G. H. Cocks, New York.
159 Two Atypical Cases of Sinus Thrombosis. S. J. Kopetzky, New York.
160 Diagnosis of Extrauterine Pregnancy, and Report of Case of Primary Ovarian Pregnancy. J. A. MacLeod, Buffalo, N. Y.
161 Excision of the Elbow Joint: Report of Two Cases. G. F. Shields, New York.
162 Case of Extensive Chest Injury—Plastic Operation—Recovery. W. H. Axtell, Bellingham, Wash.

Archives of Pediatrics, New York

February

163 Fresh Air in Treatment of Disease. E. E. Graham, Philadelphia.
164 *Idem. W. P. Northrup, New York.
165 Restoration of Extreme Scoliosis to Perfect Symmetry. W. G. Elmer, Philadelphia.
166 Scarlet Fever Carriers. C. Herman, New York.
167 Scarlet Fever with Complications, Associated with Chicken-pox and Whooping Cough. H. M. McClanahan, Omaha, Neb.
168 *Scarlet Fever From a Wound in the Foot. F. Van der Bogert, Schenectady, N. Y.

164. Abstracted in THE JOURNAL, July 11, 1908, p. 157.

168. Scarlet Fever from Wound.—Van der Bogert reports the case of a boy, 5 years old, who injured his foot on July 2, by stepping on a rusty nail. The wound apparently healed quickly, and in two weeks the child was running about in bare feet. On July 18, he was seen by Van der Bogert, who found the wound inflamed, with a scarlet areola and lines running from it, and an enlarged inguinal gland. By July 20 "a typical scarlet fever rash had developed, together with the strawberry tongue with a thick white coat at center, congested tonsils, swollen and streaked with a yellowish and brown membrane, a culture from which showed no diphtheria bacilli." On July 21, the urine was albuminous, and examination of the throat caused bleeding, followed by epistaxis. Examination of pus from the foot on July 23, showed a pure culture of streptococci, which were also present in a throat culture next day. On July 25 a younger sister developed scarlet fever, desquamation following. This, the author considers, clinches the diagnosis. His view is that the virus entered the body at the point of injury between the date of the child running about barefoot and his being first seen by the author, that is between July 16 and 18. This would give the incubation period, to the appearance of the rash on July 20, of from two to four days.

Illinois Medical Journal, Springfield

February

169 *Effects of Vaccine Therapy in Joint Tuberculosis. E. H. Ochsner, Chicago.
170 *Motility of the Stomach, a Valuable Factor in Diagnosis of [illegible] R. Barker, Chicago.
171 [illegible] G. W. Green, Chicago.
172 [illegible] olitis. C. Beck, Chicago.
173 *[illegible] G. K. Eyster, Rock Island.
174 Left Nephrectomy for Hypernephroma. V. J. Baccus, Chicago.

169. Joint Tuberculosis.—Ochsner discusses the effects of vaccine therapy in joint tuberculosis and is convinced that, when properly employed, vaccine has a threefold effect. First it reduces the mortality; second, it hastens convalescence; and third, it improves the ultimate functional result.

170. Gallstone Diseases.—Parker has found the following a safe rule by which to be guided: In diseased conditions the symptomatology of which is referred to the stomach, in which the motility of the stomach is normal, and a neurotic tendency can be excluded, we may reject a diagnosis of an intrinsic gastric lesion, and conclude that a pathologic condition exists in some organ more or less remote from the stomach, of which the apparent gastric lesion is only a reflection. If pain is one of the prominent symptoms, especially if it has no relation to the time of the ingestion of food, we should be very suspicious of a gall-bladder or gall-duct lesion due to gallstones. While the motility of the stomach is a valuable factor in the diagnosis of this form of gallstone diseases, it is by no means the only factor. Its only service is its determining influence as to whether or not the lesion or condition is intrinsic or extrinsic to the stomach.

173. Pneumonia.—Eyster discusses the hygienic and dietetic treatment of pneumonia. Absolute rest is demanded, the patient should not be raised for food or medicine, and the bedpan should be used from the start. Sponging, etc., should not be carried to the point of annoyance, though its occasional use is agreeable to quiet nervous symptoms and to aid elimination. Water should be drunk freely; an enema of normal saline solution will help the kidneys to act, and has a beneficial effect on the heart. A thorough evacuation at the outset by broken doses of calomel followed by a saline is necessary, but routine purgation is to be condemned. Digestion is slow and imperfect in pneumonia, so that toxins tend to accumulate. The diet should consist mainly of milk, plain or peptonized. Eyster does not believe topical applications have the slightest influence on the course of uncomplicated pneumonia, though they may relieve the pain of an inflamed pleura when present. He suggests that a cotton jacket covered with oiled silk be applied to the chest as a psychical measure. He disapproves of arterial sedatives, and says that aconite and veratrum may have a fatal effect on the heart. As to the question of stimulants, it is a matter of the individual patient, many individuals requiring none at all, others needing them in certain conditions, especially when there is a feeble dicrotic pulse, a dry tongue and a profound asthenic condition. Strychnin, which is most universally used, should be used only at the crucial moment when a sharp quick attack on impending depression is necessary. Then 1/20 gr. (0.003 gm.), 1/15 gr. (0.004 gm.), or even 1/10 gr. (0.006 gm.) may be given. Caffein and camphor are good and reliable heart stimulants; the former as strong black coffee, the latter hypodermically, in ether or sterile olive oil, in doses of from one to two grains every two or three hours. Cyanosis calls for the same stimulation as the heart conditions. The value of oxygen inhalations is disputed. The author dismisses altogether the list of drugs that have been used as specifics in pneumonia.

Journal of Infectious Diseases, Chicago

February

175 *Epithelial Cell Changes in Measles. J. Ewing, New York.
176 *Numerical Relationship of *Treponema pallidum* to Certain Pathologic Types of Congenital Syphilis. O. T. Schultz, Cleveland, O.
177 *Relation of the Opsonic Index to the Leucopenia and Leucocytosis Following Injections of Heated Bacterial Cultures. J. P. Simonds and L. K. Baldauf, St. Louis.
178 *Oral Administration of Antitoxins. C. T. McClintock and W. King, Detroit.
179 *Mechanism of Opsonic Action. L. Hektoen, Chicago.
180 *Opsonins Distinct from Other Antibodies. L. Hektoen, Chicago.
181 Non-Inheritance of Fluctuating Variations Among Bacteria. C. E. A. Winslow and L. T. Walker, Boston.
182 Life History of a Flagellate in the Alimentary Tract of the Sheep Tick. L. D. Swingle, Lincoln, Neb.

Supplement

183 *Historical Study of the Legislation Regarding Public Health in the States of New York and Massachusetts.* S. W. Peabody, Chicago.

175. Measles.—Ewing establishes as essentials in the cutaneous lesions of measles, first, focal neurosis with the formation of small vesicles; second, isolated necrosis of epithelial cells; third, diffuse perinuclear vacuolation of epidermal cells and of dermal glandular structures; fourth, congestion, edema, swelling and proliferation of epithelial cells and marked increase of large round cells. In the mucous membranes of the pharynx and respiratory tract there is an extensive sub-epithelial infiltration with round cells and also focal necrosis. Koplik's spots probably result from focal processes of this kind. Ewing believes that these lesions suggest the activity of a bacterial microbe, rather than of a protozoal one.

176. Treponema Pallidum and Syphilis.—Relying on results of routine examination for *Treponema pallidum* in material from a large number of autopsies on infants, Schultz classifies congenital syphilis into two groups. To the first belong cases showing vascular involvement and marked interstitial changes. In this group the organisms are not numerous and death results partly from the anatomical changes and partly from toxemia. In the second group the changes as such are not characteristic, but the organisms are present in overwhelming numbers, death being probably due to an acute intoxication. As regards germinal syphilis, Schultz holds that infants with congenital syphilis born during the latter half of pregnancy surely can not be the result of germinal infection.

177. **The Opsonic Index.**—Simonds and Baldauf find that in rabbits injection of heated bacteria is followed in from twenty minutes to four hours by leukopenia which is succeeded after two or three days by a marked leukocytosis, the leukocytosis returning to normal in about four days. The opsonic index shows a fall lasting for two to four days and then a gradual rise, the maximum being reached between the fourth to the eighth days. The greatest leukopenia precedes the greatest fall in the opsonin and the greatest leukocytosis precedes the greatest opsonic rise.

178. ***Oral* Administration of Antitoxins.**—McClintock and King show that inhibition of digestion permits the absorption of toxins and antitoxins from the stomach. By treating children as follows, the oral introduction of antitoxin has given uniform and satisfactory results: When possible no food for at least four hours before administering serum; one hour before giving the serum a glass of 1 per cent. sodium bicarbonate solution is given; and with the antitoxic serum is given one minim of a fluid extract of opium and from four to ten minims of a saturated solution of salol in chloroform. In nineteen children and hundreds of animals treated along these lines serum sickness did not occur. The authors believe that the oral method may be preferred for prophylaxis because of the ease, the absence of danger, and the small cost. For curative purposes, however, the hypodermic method can not yet be replaced. In animals toxins by the mouth may produce a high immunity by absorption of the toxin promoted by the means mentioned.

179 and 180. **Opsonins.**—Hektoen concludes that the opsonic substances in most normal and immune sera are specific and identical, differing only in quantity; furthermore, that the opsonic theory holds good because opsonification is the function of an independent element in the serum, and not the result of the presence of serum as a whole; finally, that opsonins are distinct from other antibodies, particularly because the curves of the various antibodies in the serum of an animal in the course of immunization do not always run parallel.

West Virginia Medical Journal, Wheeling

February

184 Tuberculosis and the Public. L. N. Harris, Mill Creek, W. Va.
185 General Anesthesia. A. O. Albin, Charlestown, W. Va.
186 Non-Surgical Treatment of Gallstones. C. R. Enslow, Huntington, W. Va.
187 Present Status of Serotherapy. H. R. Johnson, Fairmont, W. Va.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

February 20

1 John Hunter as a Philosopher. H. Morris.
2 *Importance of Early Diagnosis with a View to Successful Treatment. A. W. M. Robson.
3 *Pathology of Syphilis of the Nervous System in Light of Modern Research. F. W. Mott.
4 Early Diagnosis of Cancer of the Tongue and Results of Operation in Such Cases. H. T. Butlin.
5 Unna's Method of Treating Ulcers of the Leg. G. Pernet.

2. **Early Diagnosis.**—Robson asks: Are there not many cases seen by all of us (but especially by those who are acting as the regular medical advisers to their patients) in which the early symptoms, though definite and pronounced enough to enable a diagnosis to be made, are treated by palliative remedies simply for the relief of symptoms; and only at a later stage, when disabling conditions have developed or dangerous complications have ensued, is the importance of radical treatment insisted on? Much of the blame for procrastination, he says, undoubtedly lies in a reliance on the traditions of the past, when means of making a diagnosis were less exact, when more faith was placed in treatment by drugs, and when operation yielded such results that the physician and the general medical attendant were very properly averse to invoking the aid of surgery, either for purposes of diagnosis or for radical treatment. For fear of alarming the patient we are too apt to reserve the use of our new instruments of precision to the later stage of illness—such measures, for instance, as the sigmoidoscope, the *x*-rays, and a thorough examination of the excreta and of the blood by a skilled pathologist. Robson considers in detail the subject of early diagnosis, with a view to radical intervention in duodenal ulcer, cholelithiasis, carcinoma and simple ulcer of the stomach, ovarian tumor, cancer of the uterus, and the diagnosis of the cause of jaundice.

3. **Syphilis.**—In the Morison lectures, Mott discusses in detail the microbiology of syphilis, and dwells on the great similarity of histologic lesions of the nervous tissues in chronic trypanosome infections—for example, sleeping sickness and dourine—to syphilitic and parasyphilitic lesions. The discovery by Castellani in yaws of a spirochete which he terms *Spirochæta pallidula*, is of importance in showing that a spirillary organism, not quite morphologic with that of syphilis, is probably capable of producing a chronic disease in many of its features not unlike syphilis. He puts forward the following hypothesis to explain the phenomena of a gumma appearing spontaneously in the central nervous system long after the primary sore and apparent cure of the disease:

1. The spirochete, or some modified form of it, has remained latent in the tissues at the seat of the lesion, and for some reason, inherent or otherwise, the resistance of the tissues at that particular spot has become lowered, and the organism has exerted again its specific activity—possibly in some not yet discovered intracellular form.
2. The specific organism has remained latent in some other tissue—for example, the marrow of bone, the spleen or glands—and, escaping into the blood or lymph circulation, has, like a new growth, engendered a metastasis, which has developed and increased, producing a hyperplasia of the fixed tissue cell elements, conjunctival and endothelial.
3. *There may be varieties of specific spirochetes, one of which* may have an elective affinity for the central nervous system, as we know that the *Trypanosoma gambiense* has. If it is difficult to differentiate this trypanosome from other forms by morphologic appearances how much more difficult would it be to differentiate varieties of *Spirochæta pallida?*
4. The invasion of the body by the spirochetes has altered the blood and lymph biochemically, so that the tissue reactions to all causes which would lead to injury may take on the specific character.

In the second lecture Mott discusses the biochemical changes which occur in the tissues and fluids of the body as a result of the entry and persistence of the syphilitic virus in the body, and describes in detail the serodiagnosis of syphilis by the Wassermann method.

Lancet, London

February 20

6 *John Hunter as a Philosopher. H. Morris.
7 *Purulent Encephalitis. C. E. West.
8 Simple Methods of Diagnosis in Diseases of the Stomach. A. E. Barnes.
9 Case of Ship Beriberi Associated with an Erythematous Eruption. T. K. Monro.
10 Interpelvi-Abdominal Amputation. J. H. Pringle.
11 Historical Instance of the Adams-Stokes Syndrome Due to Heart Block. G. A. Gibson and W. T. Ritchie.
12 Henoch's Purpura and Intussusception. H. Lett.
13 Torsion of Pedicle in Fibromyoma of the Broad Ligament. E. C. Bevers.
14 *Thrombosis of the Cavernous Sinus.* S. Stephenson.

6. Published also in the *British Medical Journal*, Feb. 20, 1909.

7. **Purulent Encephalitis.**—West points out that in septic infections of the brain, just as in septic infection of cellular tissues, we meet not only with localized and clearly delimited abscess—a condition which, while of grave risk, leaves a fair chance for the patient's recovery if correctly diagnosed and suitably operated on early—but also with conditions of diffuse infection, sometimes with, sometimes without pus, but in which the opening up of pus if present, gives but slight relief and has little or no effect on the fate of the patient. The problem, as in all cases of spreading infection, is to give sufficient drainage to enable the process to be cut short. He describes such a case in a boy of 17 years. In such a case it is virtually impossible to drain such a soft tissue by the use of tubes. The holes are plugged up by the soft surrounding

tissue. Drainage can be effected, however, by removal of the overlying brain as was done in the case reported. The apparently normal cortex was exposed, lying on the outer aspect of the sloughing buried area which it was desired to treat. A large Volkmann's spoon was taken and the brain substance was boldly scooped away until the sloughing tissues were widely exposed and in large part removed. The cavity thus formed, which would at first have held the thicker half of a hen's egg quickly filled up by the flowing in, as it were, of the semi-fluid brain, so that it was soon almost entirely obliterated. The surface which had been brought to the level of the surrounding cortex was, however, now the deeper surface of the original area of brain infection, which was thus freely exposed and enabled to drain. No attempt to remove the tissues on the deep aspect of the original abscess was made, for it was felt that the risk of opening the lateral ventricle was too great. The brain rose to the level of the margin of the opening in the dura mater but did not protrude through it. The newly exposed surface was almost entirely covered by sloughs, and the brain substance removed had been chiefly in the same condition and smelled horribly. So far, no serious symptoms have developed.

Clinical Journal, London

February 17

15 Trophoneuroses and Angioneuroses of the Extremities. T. D. Savill.
16 The Importance of Thorough and Rational Examination of the Urinary Organs. R. P. Rowlands.
17 Surgical Treatment of Tuberculosis of the Epididymis and Testicle. C. G. Cumston.

Medical Press and Circular, London

February 17

18 Meningeal Hemorrhage. H. Chauffard.
19 Treatment of Indigestion in Infants. E. Pritchard.
20 Arrest of Mammary Secretion. A. J. Wallace.
21 Pathogeny, Differentiation and Treatment of Gout. S. A. Arany.

Practitioner, London

February

22 *Relation of Some Constitutional Conditions to Local Lesions, Traumatic and Otherwise. Sir W. H. Bennett.
23 Addison's Disease. W. H. White.
24 *Fact and Fiction, or Prognosis in Cases of Fracture. W. A. Lane.
25 Myxedema. G. Rankin.
26 *Pulmonary Embolism and Thrombosis after Laparotomy. L. A. Bidwell.
27 Orthopedic Surgery. A. H. Tubby.
28 Recent Work on Anesthetics. J. Blumfeld.
29 *Action of Drugs on Diseases Caused by Protozoa. W. E. Dixon.
30 Puerperal Pyemia. Vaccine Treatment. J. T. Hewetson.
31 Adulteration of Food. W. S. Tebb.
32 Paroxysmal Tachycardia Occurring in Mother and Daughter. A. W. Falconer.
33 Injuries to Hand with Relation to Insurance. J. A. Mackenzie.

22. **Constitutional Conditions and Local Lesions.**—Bennett points out that it is with an individual with a constitutional defect much as with a dog with a bad name—no matter how good his subsequent behavior may be, it may be impossible to get rid of the stigma. Frequently the existence of some aberration of constitution is allowed to outweigh the local evidence presented by the disease itself. He quotes a number of instances in support of this view and draws the following conclusions:

> 1. In diagnosis, neither the history of the case nor constitutional taint in the patient should be allowed to override the value of local appearances.
> 2. The results of laboratory investigations carry comparatively little independent weight, unless coupled with a very careful consideration of the clinical conditions.
> 3. Objective manifestations of abnormality, occurring in more than one situation at the same time in a person the subject of a constitutional taint—for example, syphilis or tuberculosis—are not necessarily of the same nature.

24. **Fracture.**—Lane, the advocate of operative measures in fracture, in this article supports his position by a flank attack. He drops the question of the good results of operation which he has already sufficiently enforced, and endeavors to show that the vast majority of statements which have been made as to the satisfactory results of treatment by splints and manipulation are not deserving of serious consideration.

26. **Embolism After Laparotomy.**—Bidwell suggests that, excluding cases of oral sepsis, most of the cases of supposed pleurisy and pneumonia occurring within from one to three weeks after a laporotomy, are probably embolic in origin. In treatment, we should remember the conditions favoring thrombosis, and so give plenty of fluids, and avoid milk, calcium salts, and carbonate of magnesia. Aspirin will usually relieve the pain, but morphin may be necessary, and there is no contraindication to its use; stimulants are indicated, and, if the breathing is seriously embarrassed, oxygen is advisable. The patient should be kept quiet for the first twenty-four hours, but after this he should sit up in bed and be allowed to get up as soon as the pain has passed off, and the temperature has become normal. Bidwell has never seen a fatal thrombosis or embolism occur after one of these mild seizures, so the prognosis, in his opinion, is favorable.

29. **Drugs and Protozoal Diseases.**—Dixon mentions five different drugs, all of which have one action in common; they are all general protoplasmic poisons, and their action is primarily on relatively undifferentiated protoplasm such as the leucocytes of the blood and protozoa. Some of them have a selective toxic effect on one form of protozoon and some on another. Quinin is especially toxic to the malaria organism, mercury to the spirochete of syphilis, and antimony to trypanosomes, while the action of arsenic in pernicious anemia and of salicylates in acute rheumatism suggests that these diseases also may be protozoal in origin.

Archives Générales de Chirurgie, Paris

January, III, No. 1, pp. 1-110

34 *Congenital Dislocation of the Wrist. (Luxation congénitale de l'extrémité inférieure du cubitus.) R. Robinson and F. Jacoulet.

34. **Congenital Dislocation of the Wrist.**—Robinson and Jacoulet present an illustrated historical study of "Madelung's deformity," that shows that there is a certain analogy between congenital dislocation of the wrist and congenital dislocation of the hip joint. In both cases the cavity for the reception of the head of the bone is too shallow. In the case of the hip joint the deformity is not noticed until the child begins to walk. At this time the traction from walking aggravates the deformity. The same occurs with the wrist; the joint is defectively formed, predisposed to backward dislocation, but as long as the joint does not have much strain the deformity is not noticed. A trauma, however, even slight, or the use of the arm as the subjects begin to do regular work, at once aggravates the condition. This radius curve is like genu valgum; in both it is only an exaggeration of a normal condition. Surgical intervention has not much chance to improve the conditions. The best treatment is with massage, electricity, and the use of an orthopedic apparatus to hold the wrist in place and to prevent aggravation of the deformity. This does not cure any more than the various surgical measures that have been proposed, but it relieves the patients and allows them to resume work.

Archives de Médecine des Enfants, Paris

January, XII, No. 1, pp. 1-80

35 *Septicemia in the Course of Cutaneous Affections in Young Children. *V. Hutinel and L. Rivet.*
36 *Familial Infantile Diabetes. G. Lion and C. Moreau.
37 Progressive Atrophy of the Muscles in Children. A. Moussous and F. Carles.

February, No. 2, pp. 81-160

38 *Diphtheric Conjunctivitis Following Measles. E. Weill and G. Mouriquand.
39 Pathogenesis of Tuberculous Infection. J. Roux and P. Josserand.
40 Inversion of Bladder Forming Hernia Through the Urethra in Child of 2. (Hernie de la vessie.) V. Imerwol.

35. **Septicemia in Course of Cutaneous Affections in Children.**—Hutinel and Rivet refer in particular to septicemia occurring in children in the hospital for treatment of some cutaneous affections, and they comment on its fulminating character. They believe that passages through several children confer special virulent properties on certain germs, while the children may be peculiarly susceptible on account of a tendency to anaphylaxis. They describe nine cases in detail and refer to a number of others in French literature.

The infants affected are generally large and fat, with patches of eczema on the face and around the ears, and with confluent impetigo of the scalp. When brought to the crowded hospital an effort was made to isolate them and nothing was done for the skin trouble except possibly to apply an aseptic compress or cover with oiled silk. But during the night the temperature rose to 104 F. and still higher; and the eczema seemed to fade. Pulse and respiration became rapid and irregular, convulsions followed and death ensued after a few hours of extremely high temperature. A too active treatment of the skin affection can not be incriminated as these serious symptoms developed before anything was done, in most cases generally in less than twenty-four hours. In only two of the cases was the interval as long as six days before the symptoms of septicemia developed. The eczema never subsided completely as the general symptoms developed; the lesions looked a little paler, but they persisted otherwise unmodified. The septicemia continued its fatal course unchecked by attempts to induce revulsion. In three of the cases reported the temperature subsided in cold baths and the infants recovered; in two cases recovery ensued after a series of intestinal disturbances and intense diarrhea. In certain other cases on record suppurative otitis or cutaneous abscesses are mentioned. The children who recovered were between fourteen and twenty-four months old; all under ten months succumbed. None of the theories advanced to explain these "eczema deaths" by metastasis, the status lymphaticus, autointoxication, etc., have a solid basis. The assumption of a "hospital infection" is more plausible.

36. **Familial Infantile Diabetes.**—Lion and Moreau have been able to find records of 43 cases of diabetes in children; in 10 a familial tendency was evident. The disease developed between 8 and 12 in 17 out of the 43 children; the youngest patient was not quite 2. An inherited tendency was evident in 62 per cent. of the 18 cases in which the family history is known. The diabetes terminated fatally in 37 out of the 43 cases in from a few weeks to eight months. The prognosis for the family is grave, as, once installed in a family, the disease menaces all the children, but the cases on record in which one or more children have escaped show that this is possible, and that it occurs in three-fourths of all the cases. Treatment is the same in proportion as for an adult.

38. **Diphtheric Conjunctivitis Following Measles.**—The five cases reported show that there are two types of this affection. The tardy form develops ten, twenty or thirty days after the subsidence of the eruption, involving the cornea and causing perforation in some cases, but with complete restitution in a third of the cases and no fatalities in any instance. Serotherapy does not seem to influence the progress of the lesions. The second form is much more serious; it develops during the eruption or just as it is subsiding, and progresses inexorably to perforation of the cornea and death, unmodified by serotherapy or any other measures.

Presse Médicale, Paris

February 10, XVII, No. 12, pp. 97-104.

41 New Streptococcus in the Mouth. (Nouveau streptocoque buccal.) H. Roger.
42 Alopecia of Dental Origin. (Les pelades d'origine dentaire.) Rousseau-Decelle.
43 Trephining and Curetting the Maxillary Sinus through the Nose. G. Mahu.

Revue de Gynécologie et de Chirurgie Abdominale, Paris

XII, No. 6, pp. 947-1152. Last indexed Dec. 5, 1908, p. 2007

44 Tuberculosis of the Uterine Cervix. (Tuberculose du col de l'utérus.) Chaton.
45 Technic of Transverse Hypogastric Incision. L. Gernez and E. Papin.
46 Subphrenic Abscess. A. Catz and L. Kendirdjy. Commenced in No. 3.

Semaine Médicale, Paris

February 17, XXIX, No. 7, pp. 73-84

47 *Nasal Crises in Tabes. M. Klippel and J. Lhermitte.
48 *Treatment of Stenosis of the Larynx by Laryngostomy with Dilatation. G. Ruggi.

47. **Nasal Crises in Tabes.**—Klippel and Lhermitte call attention to the differential and prognostic value of the occasional phenomena in the sphere of the sense of smell and of nasal sensation and secretion which are an instructive symptom of incipient tabes or may accompany the advanced phases indicating involvement of the brain in the tabetic process. They describe a number of typical examples of the various forms of these tabetic nasal crises: The subject may suddenly experience a tickling in the nose followed by the sensation of the smell of fish or rotten eggs, or the spasm may occur without any preliminary sensations, merely the strong odor of rotten eggs, sometimes compelling him to leave the table if eating at the time. In other cases there are the sensations of a peculiar odor and taste in the mouth with excessive flow of saliva or nasal discharge. These nasal crises do not seem to be rare in tabes; but their diagnostic importance hitherto has been generally overlooked. They may occur and be pronounced before there is any sign of ataxia. In some cases the crisis may be accompanied by sneezing or a spasmodic cough suggesting whooping cough, with lachrymation and rhinorrhea, or periods of excessive nasal discharge may be the only element of the nasal crisis. Pathologic anatomy confirms the findings in the clinic by showing the lesions in the apparatus that governs the sense of smell and the secreting function and vasodilatation in the nasal mucosa. The disturbances indicate a process affecting and destroying the olfactory tract and the trigeminal nerve and threatening others in the vicinity, suggesting the possibility of impending mental decay.

48. **Treatment of Stenosis of the Larynx with Laryngostomy and Dilatation.**—Ruggi claims priority for this method and states that he has always cured his patients in from 38 to 63 days and without any tendency to gangrene or other disturbance. He lines the larynx with thin rubber tissue, packing the tube thus formed with gauze, as he describes in detail, reviewing his extensive experience since 1892.

Archiv für Verdauungs-Krankheiten, Berlin

XV, No. 1, pp. 1-158

49 *Diameter of the Digestive Tract. (Zur Kenntnis der Querdurchmesser des Verdauungskanals.) W. Jaworski.
50 Autolysis of Elements of Food. (Autolyse von Nahrungsmitteln.) A. Maier.
51 *An Interesting Gastric Tumor. (Magentumor.) O. J. Wynhausen and J. D. Tjeenk-Willink.
52 *Practical Reliability of Cammidge's Pancreatic Reaction. W. Krienitz.
53 *Phosphaturia and Origin of Phosphate Stones. J. Goldbaum.
54 *Syphilitic Affections of Stomach and Liver. (Syphilitische Erkrankungen des Magens und der Leber.) N. M. Rudnitzki.
55 *Symptoms in Early Stage of Cirrhosis of the Liver. (Zur Semiotik des Fruhstadiums der Lebercirrhose.) M. J. Lifschütz.

49. **Diameter of Digestive Passages.**—Jaworski relates experiments to determine the width of the lumen of the digestive passages. In the one person examined, 17 mm. seemed to be the limit. He was a healthy young farm hand with normal digestion, and he swallowed before breakfast a ball made of a mixture of about equal parts of wax and cocoa butter, to which a little charcoal was added. Another was not given until that ball had been refound in the stool. In this way he took balls increasing in size from 10 to 17 mm. and all were passed in turn the second or third day. Then a ball of 18 mm. in diameter was given and this failed to appear but was finally expelled with considerable difficulty in about three weeks. No pains or other disturbances were noticed from the balls in the course of the tests.

51. **An Interesting Gastric Tumor.**—The case related from Amsterdam is cited as unique in some particulars, especially in the amount of papillomatous proliferation, following an almost healed ulcerative process. The case shows that even when a large tumor is palpable in the stomach it is not necessarily malignant, and that prompt excision will ward off any possible tendency to cancerous degeneration later. It further teaches anew that ulcers may develop and run their course in the stomach without any symptoms to attract attention to them. There never had been any spontaneous pain or tenderness on pressure in this case and the patient was unaware of anything wrong until Nature's healing process of proliferation had reached such an excess that it obstructed the pyloric out-

let. The glands had participated in the proliferation to a remarkable extent, but there were no signs of a typical round ulcer.

52. **The Cammidge Reaction.**—Kvienitz has applied the Cammidge pancreatic test 250 times, followed by operative intervention in 27 cases. The findings of the test corresponded with the clinical course of the cases in 80 per cent. He is convinced that the test will be found useful by surgeons for determining the condition of the pancreas in affections of the liver and bile ducts, and may supply useful information to internists in regard to diagnosis, prognosis and indications for treatment.

53. **Phosphaturia and Phosphate Stones in the Kidneys.**—Goldbaum confirms the fact that obstinate neurasthenia is always encountered with phosphaturia, and consequently as little as possible should be done to attract the patient's attention to the urinary apparatus. Orlowski, on a basis of 16 cases, regards phosphaturia as almost always a traumatic neurosis. If of bacterial origin, the underlying cause should be removed: surgical affections remedied, systematic irrigation of the bladder practiced in case of catarrh, and dietetic-hygienic treatment instituted for inflammation of the kidney pelvis, with also copious ingestion of fluids. If the urine is very alkaline or contains lime, the diet should be regulated to avoid excess of vegetables—exactly the reverse of the indications with uric-acid stones. The formation of phosphate stones can be prevented only by curing the phosphaturia. In many cases, the cure of the accompanying stomach affection, hyperacidity or excessive production of gastric juice, is followed by the subsidence of the phosphaturia. A change of climate or trip to a health resort may give good results; or carbonic acid may be given well diluted. It is characteristic that the phosphaturic patients apply to the physician for relief from bladder disturbances or nervousness or heart trouble. Sometimes the patient's attention is aroused by the turbid, grayish milky color of the urine. Robin's experience has been that only about one-third speak of stomach trouble. When there is stone colic the pains are generally localized in the neck of the bladder. In the intervals the patients may complain of depression, slight dyspnea, changes in the pulse, disturbances in vision, intercostal neuralgia and neuralgic pains in the shoulder blades, calves and elbows. The appetite is good and no attention is paid to the stomach symptoms as a rule; at most there is mention of a little weakness a few hours after a meal or eructations, constipation or awaking in the night with pain in the stomach region. The patients generally disregard the stomach symptoms on account of the preponderance of others. The physician should always make a thorough examination of the stomach; he will almost always discover that that organ is the source of the trouble and that the phosphaturia is merely a secondary phenomenon. Leucocytes and red corpuscles are generally found in the urine with the phosphates from their irritation of the urinary passages.

54. **Syphilitic Affections of the Stomach and Liver.**—Rudnitzki remarks that although the authorities are now proclaiming that syphilis of the internal organs is far from being so rare as generally assumed, yet this fact has not permeated into general practice. He reports five cases and reviews the literature on the subject. His experience includes between fifteen and twenty cases of the kind, all previously diagnosed and treated as chronic gastric catarrh. His experience has been that chronic gastric catarrh of other origin is exceptional among the poorer classes. He denounces as an absurdity the requirement of the "venereal seal" as indispensable for the diagnosis of syphilis. Much more rational is differentiation on the basis of a number of minor points: a history of still-born children and mortality of the viable; round atrophic scars; periostitis in the legs and base of the skull, possessing a specific resistance which distinguishes them from the lesions of gout and tuberculosis; indurated glands, sometimes only on one side of the body, isolated and indolent; tenderness of the sternoclavicular articulations which seem to have lost their resisting power and yield to pressure (a common means for diagnosing tertiary syphilis in Russia); irregular pupils and irregular reaction to light; asymmetrical sensitiveness to pain on the two sides of the body—these last symptoms suggest a specific endarteritis of the vessels in the brain. Another instructive symptom is enlargement and tenderness of the liver for which no other cause is known. The patient may feel better after taking a decoction of sarsaparilla, a popular remedy in Russia. The grouping of these signs may reveal latent syphilis and give the clue to successful treatment. In the syphilitic liver disease treatment may give favorable results in less than a month, but in other cases a year may be required. In his two stomach cases a complete cure was soon realized. In one of the liver cases the serious affection had persisted for thirteen years, under various methods of treatment, but subsided completely in as many days when specific treatment was instituted.

55. **Early Stage of Cirrhosis of the Liver.**—Lifschütz states that during the last few years he has tested the stomach content for occult blood in every case examined, and has made several interesting discoveries. He mentions here only one of the facts thus learned: the constant finding of occult blood in the stomach content and stool in two cases of what proved to be later cirrhosis of the liver. The discovery of occult blood may thus prove a sign of this affection in its earliest, still symptomless stage.

Beiträge zur Geburtshilfe und Gynaekologie

XIII, No. 2, pp. 173-338. Last indexed Aug. 8, 1908, p. 538

56 *Position During Delivery to Facilitate Expulsion. (Lagerung der gebärenden Frau, Lendenbiegsamkeit und austreibende Kraft.) B. S. Schultze.
57 True and Apparent Hermaphroditism. (Wahres und scheinbares Zwittertum.) H. Bayer.
58 Retained Relics of Ovum and the So-called Placental Polyps. (Retinierte Eireste und die sogenannten Placentarpolypen.) G. Schickele.
59 Habitual Death of Fetuses. (Zur Frage des habituellen Fruchttodes.) Id.
60 Changes in the Uterus with Age. (Altersveränderungen des Uterus.) Ogata.
61 Peculiar Course of Pelvic Cellulitis. (Seltene Besonderheiten der Pelveocellulitis.) A. Mayer.
62 Weight During Pregnancy. (Die Gewichtsverhältnisse in der Schwangerschaft.) M. Krüger.
63 Gonococci in Blood of New-Born Infant. (Fall von Gonohämie beim Neugeborenen.) A. Hamm.
64 Carcinoma of Body of Uterus in Woman of 23. (Korpuskarzinom bei einer Dreiundzwanzigjährigen.) E. Engelhorn.
65 Finer Structure of Secreting Epithelium of Uterus and Tubes. (Bau des sezernierenden Uterus- und Tubenepithels.) E. Holzbach.
66 *Childbirth in Elderly Primiparæ. (Geburten bei alten Erstgebärenden.) Ida Democh.
67 *Surgical Treatment of New-Born Infants. (Zur chirurgischen Behandlung Neugeborener.) R. Oeri, Jr.

56. **Position During Childbirth.**—Schultze ascribes peculiar advantages to the dorsal decubitus during delivery, as it allows the stretching of the lumbar spine. The expulsive force of the uterus then works along the line of least resistance, which is not the case when the woman lies on her side and the uterus slides out of the direct median line and much of its expulsive action is wasted. Stretching out the lumbar region allows the fundus of the uterus to slide lower down, and reduces the angle of impact between the head and the soft parts, especially against the perineum. The more oblique this angle, the more easily the head slides out. When the head reaches the floor of the pelvis and lodges there, with normal anatomic conditions, its further expulsion can be facilitated by stretching the lumbar spine, bringing the buttocks lower in proportion by introducing a thick cushion under the small of the back, thus raising and stretching the spine. The lumbar segment is capable of much relaxation and stretching, and it is remarkable, he says, how this facilitates delivery, even when the head has been lodged there for several hours and the contractions of the uterus are growing weak. He reports experiments on 33 cadavers which showed the surprising amount of stretching possible in the lumbar region and the yielding of the sacroiliac articulation to make more room. The promontory becomes more prominent, the ilium and sacrum recede from the pubic bone and the soft parts of the perineum are stretched. All this stretching is of course very slight, but may prove of immense advantage when the

St. Robert [illegible]

lumbar spine is elongated by the cushion, the patient lying on her back.

66. **Childbirth in Elderly Primiparæ.**—Democh reviews 150 cases of childbirth in women of from 27 to 35, and in 40 between 35 and 45. Forceps were applied in 11 per cent. of the total 190 cases. The perineum was lacerated in 18.41 per cent., and in half of the 35 cases of laceration forceps had been used. The age is thus seen to have little influence on the course of delivery, the healthy condition and elasticity of the muscles being the decisive factors.

67. **Surgical Measures on New-Born Infants.**—Oeri reports from von Herff's clinic at Basle three cases of depression of the skull in which serious symptoms demanded prompt intervention. With an instrument resembling a silver corkscrew, he drew up the depressed portion to the level of the rest of the skull. He also gives an illustrated description of a device for vertical extension of the fractured humerus by means of a tripod resting on the crib, pulling the arm upward by extension with weights and pulley. The fracture healed perfectly in his cases in two and three weeks with no impairment of function.

Berliner klinische Wochenschrift

February 1, XLVI, No 5, pp. 189-236

68 Psychic Causes of Mental Disturbances. (Ueber psychische Ursachen geistiger Störungen.) E. Meyer.
69 *Bilateral Optic Nerve Disturbances with Steeple-Shaped Skull. (Ueber doppelseitiges Sehnervenleiden bei Turmschädel.) J. Hirschberg and E. Grunmach.
70 *Combination of Ritgen's Flank Incision with Vaginal Cesarean Section for Contracted Pelvis. (Die Laparo-Kolpohysterotomie eine Kombination der Ritgen'schen Gastro-Elytrotomie und des vaginalen Kaiserschnitts—als neue Therapie des engen Beckens.) A. Dührssen. Id. E. Solms.
71 *Treatment of Pulmonary Tuberculosis with Kuhn's Lung Suction Mask. (Behandlung mit der Kuhn'schen Lungensaugmaske.) F. Gudzent.
72 Iodin Staining of Leucocytes in Dermatologic Affections. (Jodophilie der Leukocyten bei dermatologischen Affektionen.) G. Stümpke.
73 Dosage of Roentgen Rays. (Röntgenstrahlenmessung in der Praxis.) F. Davidsohn.
74 *Artificial Respiration for Adults. *(Zur Frage der manuellen* künstlichen Atmung Erwachsener.) A. Loewy and G. Meyer.
75 Method for Determining Curative Power of Drugs in Trypanosomiasis. (Eine besondere Methode zur Untersuchung des präventiven und kurativen Wertes der Medikamente bei den Trypanosomiasen.) D. Ottolenghi.

February 8, No. 6, pp. 237-284

76 Treatment of Pellagra with Atoxyl plus Arsenic Trioxid. (Kombinierte Behandlung der Pellagra mittels Atoxyl und arseniger Säure.) V. Babes, A. Vasiliu and N. Gheorghus.
77 *Symptomatology of Tuberculosis of Iliosacral Articulation. A. Stieda.
78 *Acute Serous Meningitis. G. Axhausen.
79 Compressed-Air Illness. (Caissonmyelitis.) Wassermeyer.
80 Psychotherapy and Psychoanalysis. O. Juliusburger.
81 Treatment of Mouth Breathing. (Indikationen, neuere Methoden und Ergebnisse der kiefer-orthopädischen Mundatmungsbehandlung.) A. Peyser and R. Landsberger.
82 Technic of Clinical Microscopy and Microphotography. C. Posner and W. Scheffer.
83 Sympathetic Epididymitis. (Epididymitis sympathica (Porosz) und nicht Epididymitis erotica (Waelsch). M. Porosz.
84 Injuries that Reveal the Instrument with which they were Inflicted. (Geformte Verletzungen.) H. Marx.

69. **Optic Disturbances with Steeple-shaped Skull.**—Hirschberg reports a case of defective vision for which he considers the abnormally narrow and high skull responsible. He has encountered seven such cases, and cites the experience of others, including Meltzer, who has reported twenty cases of congenital blindness with "steeple skull." Grunmach gives the Roentgen findings in some typical cases, calling attention to the peculiar deformities induced by the early craniostenosis, especially the remarkable width of the sella turcica. It is twice as wide as normal in the skiagram shown, and readily explains the tendency to disturbance in the optic nerve. He adds that the optic disturbances accompany oxycephalus, not ordinary brachycephalus.

70. **Improved Vaginal Cesarean Section.**—Dührssen gives an illustrated description of a method of vaginal Cesarean section which he thinks is a great advance over all other technics in treatment of contracted pelvis. It is based on the flank incision proposed by Ritgen in 1820, incising the abdomen in the side, near the bladder, pushing up the peritoneum and extracting the child by vaginal Cesarean section. He suggests the term laparo-colpohysterotomy as best describing the technic, or "Buddha birth," as Buddha is said to have emerged from his mother's right side without causing her pain or anxiety. Dührssen commends this technic as the best adapted for contracted pelvis when the bones interfere with delivery. If the interference is from the soft parts only, vaginal Cesarean section alone is sufficient. The idea is attributed to his assistant, Solms, who reviews the indications, stating that pre-existing infection does not contraindicate this technic to save a living child, as the peritoneum is not opened.

71. **Kuhn's Lung Suction Mask in Pulmonary Tuberculosis.**—Gudzent reports experiences with seven cases, his impressions being favorable, on the whole.

74. **Preferred Technic for Artificial Respiration.**—Loewy and Meyer criticize the Schäfer method for artificial respiration which has recently been advocated by the British authorities as the best and safest. They show that the lungs do not receive as much air by this method, the patient being placed with his face down to facilitate the escape of water from the air passages. This interferes with the free intake of air possible with other technics, and it has the further disadvantage that it is liable to force the stomach content upward and possibly allow some of it to be drawn down into the air passages. They denounce the Schäfer method as far more dangerous than the Silvester-Brosch technic. The latter is contraindicated only when the arms are fractured or there is other severe injury of the upper part of the body.

77. **Tuberculosis of the Iliosacral Articulation.**—Stieda calls attention to the value of Trendelenburg's sign, the sinking down of the pelvis on the sound side as the patient stands on the affected leg and lifts the other foot. The patient instinctively tries to avoid a position likely to induce pain, but there is some pain in the back of the thigh. This sign is also a valuable index of the improvement under treatment. The patient in the case recorded was able to bend the spine toward the affected side without pain, but bending toward the sound side induced considerable pain; in other cases he has found this reversed. A slight trauma is apparent in the history of nearly all such cases. In treatment a walking apparatus would be effectual if it could relieve the involved iliosacral articulation, but this could be accomplished only by having the walking apparatus supported at the chest. Such an apparatus would be too inconvenient and clumsy; consequently this affection does better with rest in bed, or a plaster bed, with general measures. In his first case when the patient stood on the left leg, the side of the lesion, and raised the right leg, the right half of the pelvis sank very low down and there was much pain at the rear of the left thigh. At the same time the spine in the lumbar region curved toward the right. This Trendelenburg sign was not so pronounced in his three other cases. Under rest in bed for a month the conditions were very much improved in all.

78. **Acute Serous Meningitis.**—Axhausen reports in detail the case of a girl of 11 hit by a stone in the left forehead. Apparently the wound healed normally, but headache and fever kept up with some vomiting and stupor. The wound was opened; the dura protruded and a strong jet of fluid followed puncture; while the pia showed a "bullous edema." The temperature and pulse returned to normal at once, but enormous amounts of clear cerebrospinal fluid were discharged from the wound for three or four days. Then the dressings remained dry and at once the temperature ran up very high again with constant convulsions. He opened the wound again, the fluid spurting as before, but without much benefit, and he then trephined again, several inches to the rear of the wound, near the motor region. The puncture gave the same picture here: protruding dura, spurting fluid and "bullous edema" of the pia. The fluid was constantly sterile, and the child made a rapid recovery after this last intervention. These cases of acute serous meningitis following trauma are extremely rare. The retrogression of the serous inflammation may result in the walling in of some pocket of fluid which may be the origin of certain subdural cysts, causing symptoms of compression or merely discovered as autopsy surprises.

Deutsche medizinische Wochenschrift, Berlin

February 11, XXXV, No. 6, pp. 233-280

85 *Determination of Blood Pressure and Its Importance in Practice. (Methoden zur Bestimmung des Blutdrucks beim Lebenden und ihre Bedeutung für die Praxis.) F. Kraus.
86 *Determination of Volume of Heart Beat. (Bestimmung des [illegible] Plesch.
87 [illegible] Strubell.
88 [illegible] in Local Application. V. Notthafft. Commenced in No. 5.
89 Five Fatal Cases of Intoxication, Suggesting Cholera, from Gases Generated by Ferrosilicium—part of Ship's Cargo. (Funf choleraverdächtige, durch Phosphorwasserstoff verursachte Todesfälle, bei denen choleraähnliche Vibrionen gefunden wurden.) H. Dold and C. Harris (London).

85 and 86. **Measurement of the Blood Pressure.**—Kraus presents arguments to demonstrate the great importance of knowledge of the blood pressure in conditions accompanied by transient or permanent abnormally high or low arterial tension, and states that Plesch has now finally succeeded in devising a technic which, for the first time, allows the determination of the absolute volume of the blood pressure per minute and per heart beat. The technic can be applied to every patient and is not particularly complicated. It is based on the capacity of the blood to bind oxygen, and on the proportion of carbon dioxid in the venous blood of the right ventricle, the latter being determined by the balance of tension with the gas content of a respiration sack which is made to represent, as it were, a magnified alveole. Plesch gives an illustrated description of the simple apparatus, its mode of application and the findings. He says that it solves the question of quantitative measurement of the dynamics of the circulation, of the work of the heart and, above all, of the limits of accommodation of which the heart is capable.

Medizinische Klinik, Berlin

January 31, V, No. 5, pp. 157-198

90 Diagnosis of Suppuration in Nasal Accessory Cavities. (Zur Diagnose der Eiterungen der Nebenhöhlen der Nase.) O. Chiari.
91 Clinical Study of the Electrocardiogram. G. F. Nicolai and A. Simons.
92 Polycythemia and its Pathogenesis (Erythrozytosen.) Luce. Commenced in No. 4.
93 *Electric Trauma. Wedel.
94 Serodiagnosis of Syphilis. (Bewertung der Wassermannschen Reaktion für die Frühdiagnose und die Therapie der Syphilis.) W. Fischer.
95 Cutaneous Tuberculin Reaction in Infants. (Die Pirquetsche Reaktion bei Säuglingen.) G. Kritz.
96 The Cammidge Reaction in Diseases of the Pancreas. B. Maass.
97 Present Status of the Paratyphoid Question. A. Waldmann.

February 7, No. 6, pp. 199-234

98 Idiocy in Children. (Ueber Idiotie im Kindesalter.) R. Neurath.
99 *Indications for Meat Broth in Infant Feeding. (Eine Indikation für Fleischbrühe in der Säuglingsernährung.) W. Stöltzner.
100 *The Weak Point for Athletes. (Ueber eine "schwache Stelle" bei Turnern.) C. Bayer.
101 Vaccine Treatment of Infectious Endocarditis. H. Fette.
102 Paracolon Bacillus Infection. (Zur Frage der Parakolibazillosen.) E. Meinicke and Neuhaus.
103 *Electric Treatment of Furuncle and Epididymitis. (Beitrag zur Verwendung des galvanischen Stromes in der alltäglichen Praxis.) F. Becker.
104 Wright's Method of Macroscopic Agglutination in Capillaries. W. Beyer.

93. **Electric Accidents.**—Wedel states that there were 34 cases of electric accidents in Switzerland during a recent year, 19 with a fatal outcome. One-third of the fatalities occurred with a voltage under 250. He has encountered 2 cases in his own practice; both patients received the shock while stepping on a trolley car, one hand grasping the metal hand rail, one foot still on the ground. He insists on the importance of having such hand rails covered with leather or made of nonconducting material. Both his patients developed severe traumatic neuroses.

99. **Meat Broth in Infant Feeding.**—Stoeltzner has found that when infants are suffering from the effects of farinaceous food they begin to thrive at once when given a mixture of milk and meat broth, even when breast milk does not seem to benefit. He describes his experience with fourteen cases of this farinaceous atrophy. The children were about five months old and bottle-fed. The broth was made as usual of beef or veal with salt but no sugar. The results were so good that he commends the mixture for this class of cases. Feeding the broth even for a few days was sufficient in some cases to tide the children past the danger point and cure the diarrhea which had been previously incessant for weeks or months.

100. **The "Weak Point" in Athletes.**—Bayer reports two cases of *professional athletes with a sarcoma in the retroperitoneal* lymph glands around the duodenum or thrombosis of the mesentery of the upper loop of the small intestine. This region of the pancreas, pylorus, duodenum, upper loop of the ileum, or portal region of the liver is peculiarly exposed to repeated trauma in athletic work. The parts are firmly fixed and can not yield like the parts below.

103. **Electric Treatment of Furuncles and Epididymitis.**—Becker describes experiences which show the superior advantages of electrolytic treatment of furuncles at any stage, the puncture hole being made large enough for the pus and detritus to escape. The pain is so slight and the other advantages so obvious that patients prefer this method to all others; it is unnecessary with this technic to wait for the boil to ripen. His success in gonorrheal epididymitis with galvanization has been remarkably favorable. In two days the patients are relieved of pain and able to go to work and the whole process is cured in from five to eight days. This is accomplished with weak currents, such as any small portable apparatus can supply, without necessity for the patient staying in bed.

Münchener medizinische Wochenschrift

February 9, LVI, No. 6, pp. 265-320

105 *Influence of Castration and Hysterectomy on the Health of the Women Later. (Einfluss der Kastration and der Hysterektomie auf das spätere Befinden der operierten Frauen.) Pankow.
106 Protecting Processes in Abdominal Cavity and Functional Treatment after Laparotomies. (Schutzarbeit im Bauchraume und über die functionelle Behandlung Laparotomierter.) O. Witzel.
107 Allowing Parturients to Get up Early. (Zum Frühaufstehen der Wöchnerinnen.) K. Mayer.
108 Puncture of Brain. (Hirnpunktion.) W. Danielsen.
109 Physiologic Changes in Outline of Stomach. (Die Entfaltung des Magens.) H. Braeuning.
110 Moving Roentgen Pictures of the Internal Organs. (Ueber kinematographisch aufgenommene Röntgenogramme. Bio-Röntgenographie der inneren Organs des Menschen.) C. Kastle, H. Rieder and J. Rosenthal.
111 Differential [illegible] Atrophy of the Diaphragm. [illegible] der Zwerchfellhernie und des [illegible] Zwerchfellhochstandes infolge von Zwerchfell-Atrophie.) H. Königer.
112 Plasticity of Liver Substance. M. Flesch.
113 Typhoid Infection of Fetus. (Ueber fötale Typhusinfektion.) W. Gaehtgens.

105. **Influence of Castration and Hysterectomy on the Health of the Women Later.**—Pankow has made a careful study of 150 cases in which the uterus was removed, comparing the clinical findings before and after the operation with the results of later examination. His research has shown that the symptoms often ascribed to the loss of the uterus or ovaries, had in fact been prominent also before the operation, but they had been overshadowed by other symptoms and often were completely forgotten by the women. After castration, disturbances occur more frequently and are more severe, the younger the women. Young women, however, bear hysterectomy without disturbances later. The disturbances from loss of the uterus are most frequent and severe the nearer to the climacteric age. When one or both ovaries are left, hysterectomy is not followed by menstrual molimina. It is important to make a distinction, however, between women inclined to nervousness, as the disturbances are liable to be much more severe in them, while normal women escape them. He believes that the uterus has an internal secretion.

Wiener klinische Wochenschrift

February 11, XXII, No. 6, pp. 187-220

114 *Measurement of the Blood Pressure. (Einige Methoden der Blutdruckmessung und ihre Resultate.) S. Federn.
115 *Remote Results of Sacral Operation for Rectal Cancer. (Ueber sakral-kokzygeal operierte Mastdarmkrebse und deren Spätresultate.) E. v. Herczel.
116 Pemphigus. E. Eitner and M. Schramek.
117 Importance and Position of Long, Boas-Oppler, Bacillus. A. Rodella.
118 Typical Intercarpal Fracture-Dislocation. E. Fischer.

114. **Measurement of the Blood Pressure, and Its Importance.**—Federn presents arguments to show that the blood pressure varies in the different organs and arteries and is not

uniform throughout, as generally accepted. He shows further that the trauma connected with application of the various sphygmomanometers or tonometers in use causes findings which interfere with correct deductions. The von Basch sphygmomanometer is the only one to date that answers the desired purpose with approximate precision, and he does not hesitate to declare that if physicians at large will master and apply the principle of this instrument in measurement of the blood pressure a new era will dawn as fruitful in results as that of the introduction of percussion and auscultation. The best test of the value of a method is the improvement in the patient when treatment is based thereon, and this gratifying experience he has had repeated a number of times. Among the facts confirmed by his findings is the unusually high blood pressure in a neuralgic area, also the increase in the blood pressure from peripheral irritation from the intestines. The relief experienced in arteriosclerosis from a purge is not due to the lessened chances for autointoxication, but to the influence of relief from the abnormal circulation in the intestines. The lower blood pressure in influenza is pathognomonic. The blood pressure in the arms may be abnormally high, while in the legs it is abnormally low, or *vice versa*. The blood pressure in the anterior superior intercostal artery is higher than in the radial in normal conditions. This relation is reversed in cardiac insufficiency, for which he has discovered anatomic grounds. The blood pressure in the intercostal artery throws light on conditions in the thoracic aorta. The connecting vessels between the intercostal artery and the aorta become very much dilated after childbirth and while the woman is nursing. In conclusion, he remarks that until the blood pressure in each case is carefully investigated, internal medicine will be merely patchwork, lagging far behind surgery, notwithstanding the Roentgen ray and other diagnostic aids.

115. **Sacral Operations for Rectal Cancer and Results.**—Herczel states that in the 1,087 cases of cancer at the Rochus Hospital at Budapest during the last ten years, the rectum was the seat of the lesion in 39, that is, in 3.6 per cent., thus forming 0.37 per cent. of the total 10,541 autopsies. He describes the technic followed and the remote results. The immediate mortality in the 82 cases in which he operated was 14.6 per cent. He states that 64.7 per cent. of 34 patients are in good health after 5 years.

Zentralblatt für Chirurgie, Leipsic

February 13, XXXVI, No. 7, pp. 209-248

119 Modification of Dahlgren's Forceps. (Eine Modifikation der Dahlgren'schen Zange.) K. Dahlgren.

Zentralblatt für Gynäkologie, Leipsic

February 13, XXX, No. 7, pp. 233-264

120 *Expulsion of the Blood from Lower Part of Body in Obstetrics. (Anwendung der Blutleere der unteren Körperhälfte nach Momburg in der Geburtshilfe.) W. Sigwart.
121 *Serum Treatment of Uterine Hemorrhage. (Behandlung von Gebärmutterblutungen mit Serum.) W. Busse.
122 *Menstruation of Nursing Mothers. (Zur Frage von der Menstruation während des Stillens.) O. Sundin.
123 Extraperitoneal Implantation of Ureter in Bladder with Vesicovaginal Fistulas. (Ueber extraperitoneale Implantation des Ureters in die Blase bei Ureter-Scheidenfisteln.) M. Madlener.
124 Speculum for Suction Treatment in Gynecology. (Vereinfachtes Saugspekulum zur Anwendung der Bier'schen Stauung in der Gynäkologie.) K. Mayer.

120. **Expulsion of the Blood from the Lower Part of the Body in Obstetrical Practice.**—Sigwart has acted on Momburg's suggestion that a constricting belt might be useful in controlling postpartum hemorrhage. In a recent case of hemorrhage persisting after manual removal of the placenta, the uterus failed to contract; as the condition was becoming serious, after about 15 minutes a rubber tube was wound twice around the waist and drawn tight. It is well known that anemia promotes the contractions of the uterus, and this effect followed in a few minutes after application of the constriction and there was no further hemorrhage. The constricting belt was gradually loosened after it had been in place for 15 minutes and was removed without the least sign of untoward effects. The application of Momburg's technic is particularly simple and easy immediately after childbirth, as the intestines are still crowded up into the upper regions of the abdomen. If further experience confirms the certain action and the harmlessness of this method, it is destined to prove an important aid in case of hemorrhage from atony after failure of other measures. Besides the direct hemostasis by compression of the aorta and ovarian arteries, the temporary interruption of the supply of blood rouses the previous atonic uterus to contract.

121. **Serum Treatment of Uterine Hemorrhage.**—Busse has treated by serotherapy 10 patients with uterine hemorrhage resisting previous measures, including curetting. There were no anatomic causes for the hemorrhages and the latter had become so severe that the general health was suffering. He injected 10 c.c. of human serum subcutaneously. The serum was derived from the blood of healthy patients being treated for displacement, under scopolamin-morphin just before spinal anesthesia. In every instance the hemorrhages ceased entirely or became much less severe after one or two days. Menstruation became normal and the patients feel well. He ascribes the hemorrhage in these cases to some general hemorrhagic tendency, probably slight hemophilia. This serum treatment was applied only when local examination was totally negative. There is probably defective production of thrombokinase, and he would prefer animal serum if such proved effectual. It is possible, he states, that this serum treatment might aid in controlling hemorrhage in cases of myoma or tumors in the adnexa.

122. **Menstruation of Nursing Mothers.**—Sundin has had 400 nursing women examined and reports that from 55 to 59 per cent. were menstruating normally while nursing their infants. In more than one-third of the cases menstruation returned in the first two months after the childbirth.

Gazzetta degli Ospedali e delle Cliniche, Milan

February 4, XXX, No. 15, pp. 153-160

125 Importance of Urinary Oxidases for Estimation of Liver Functioning. (Importanza delle ossidasi urinarie nel giudicare delle condizioni funzionali della cellula epatica.) G. Massaro.

February 7, No. 16, pp. 161-176

126 Consequences of Experimentally Induced Lesions in the Extrinsic Innervation of the Stomach. (Consequenze della lesione sperimentale della innervazione estrinseca dello stomaco.) P. Lilla.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

THE THEORY AND PRACTICE OF INFANT FEEDING. By Henry Dwight Chapin, A.M., M.D., Professor of Diseases of Children at the New York Po. Graduate Medical School and Hospital. Edition 3. Cloth. Pp. 350, with illustrations. Price, $2.25. New York: William Wood & Co., 1909.

A SYSTEM OF SYPHILIS. In six volumes. Edited by D'Arcy Power, M.B., F.R.C.S., and J. Keogh Murphy, M.D., M.C., F.R.C.S. With an Introduction by Jonathan Hutchinson, F.R.S. Vol. I. Cloth. Pp. 380, with illustrations. Price, $13.50. New York: Oxford University Press, 1908.

LIST OF THE FELLOWS, MEMBERS, EXTRA-LICENTIATES AND LICENTIATES OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND OF THE HOLDERS OF THE DIPLOMA IN PUBLIC HEALTH GRANTED JOINTLY BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS. Paper. Pp. 343.

LEHRBUCH DER GREISENKRANKHEITEN. Herausgegeben von Prof. Dr. J. Schwalbe, Berlin. Paper. Pp. 914. Price, 26 marks. Stuttgart: Verlag von Ferdinand Enke, 1909.

A SYSTEM OF DIET AND DIETETICS. Edited by G. A. Sutherland, M.D., F.R.C.P. Cloth. Pp. 893. Price, $10.50. New York: Oxford University Press.

THIRTY-FOURTH ANNUAL REPORT OF THE BOARD OF MANAGERS OF THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA, 1908. Paper. Pp. 159.

HELPS TO MEDICAL DIAGNOSIS. (A card system.) By J. T. Asbury, M.D. Price, $2.50. Wabasha, Minn.: J. T. Asbury, 521 Main St.

NINETEENTH REPORT OF THE STATE BOARD OF HEALTH OF NEW HAMPSHIRE. Vol xix, 1905-06. Cloth. Pp. 319.

TWENTIETH REPORT OF THE STATE BOARD OF HEALTH OF NEW HAMPSHIRE. Vol. xx, 1907-08. Cloth. Pp. 332.

NINETEENTH ANNUAL REPORT OF THE VISITING NURSE ASSOCIATION OF CHICAGO, 1908. Paper. Pp. 40.

THE UNIVERSITY OF LIVERPOOL CALENDAR, 1909. Cloth. Pp. 602

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Original Articles

SIMPLE FRACTURE

SOME POINTS IN ITS DIAGNOSIS AND OPERATIVE TREATMENT *

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I. DIAGNOSIS

The recognition of a complete fracture of a long bone of a limb is usually so easy as to be within the scope of any one who knows that there is a bone in the limb. The injury presents two signs, which are readily recognized and which in the systematic presentation of the means of diagnosis have obtained much prominence and are habitually given as the positive signs of fracture, namely, abnormal mobility and crepitus. The rule is precise: If abnormal mobility and crepitus can be found, a fracture exists. The mind, perhaps unconsciously, is prone to go further and to assume that if abnormal mobility and crepitus can not be found a fracture does not exist. And unfortunately, while in a large proportion of the cases of fracture in which these two signs are found the diagnosis can be readily made without their aid, in most of those in which the diagnosis is difficult or obscure these two signs are absent or are not to be obtained without manipulations which are harmful to the patient. Thus, in fractures of the small bones and of the spongy ends of the long bones, and in one of two parallel and associated bones, and even in fractures of the shaft of a long bone without displacement, both of these signs are frequently unobtainable. The fragments are too small or too deeply placed to be respectively grasped and moved on each other, or the mind remains in doubt whether a recognized mobility is abnormal and at a point of fracture or is normal and within a closely adjoining joint.

In many of these obscure or doubtful cases it is important that the positive or probable existence of a fracture should be promptly recognized, either to avoid further manipulation, and especially those excessive manipulations which may easily be so harmful and to which we are prone to resort when the patient is anesthetized, or in order that proper protection may at once be established against the harm which may result in such varied forms from the lack of support of the fragments or of enforced rest of the adjoining parts.

In many of these cases it is sufficient to establish the probability of the existence of a fracture. We do not need to take counsel of perfection. We do not need to know all the details, and we have the right to seek only for those the knowledge of which can be made useful in our treatment. We can rest on our knowledge of the type of fracture at the part concerned. It is understood that in this I have in mind mainly fractures near joints and possibly involving joints, and not those of portions of the articular end of a bone, in some of which an exceptional displacement of the fragment is a detail which it is important to recognize and correct.

This probability of the existence of a fracture—a probability which in most cases is a practical certainty —can be established by a systematic search for pain— pain on local pressure from without, pain on pressure along the long axis of the bone, and pain when the patient seeks to use the affected bone against opposition and thereby produces a cross-strain.

The search for pain on local pressure is best made with the tip of the finger or the rubber end of a lead pencil. Thus, in a Colles fracture a well-defined line of sensitiveness can be traced along the radial side and across the dorsum of the forearm just above the wrist; in fracture at the base of the neck of the femur, pain is found on pressure behind or in front just inside the great trochanter; in fracture of the surgical neck of the humerus, by pressure in front or on the outer side; in fracture of the external condyle of the humerus, by pressure on the supracondylar ridge, a little above the epicondyle, and in fracture of the shaft of a long bone, by pressure at the corresponding point on the most accessible side. This method is, indeed, our only means, except the *x*-rays, of recognizing fracture of the carpal scaphoid; that is, by point-pressure in the hollow between the extensor tendons of the thumb at the wrist, the "anatomic snuffbox."

A necessary precaution to be taken is carefully to support the limb so that the pressure, even at some distance from the line of fracture, shall not move the fragments on one another. Another obvious precaution, not often required, is to avoid mistaking the sensitiveness of a bruise for that of a fracture.

Pressure against the ends of a bone in the direction of its long axis causes pain when the bone is completely broken across, but may fail to do so when the fracture separates only a portion of the bone, such as a condyle. Thus, pressure upward against the sole of the foot will cause pain when there is a fracture of the shaft of the tibia, but not often in a case of Pott's fracture, and pressure upward at the elbow will cause pain in a fracture of the surgical neck of the humerus, but not always in a fracture of the external condyle. This method is a ready means of recognizing those obscure fractures at the upper end of the humerus in very fat people or when much swelling is present, and in fracture of a metacarpal bone, and in a Colles fracture.

An important exception is fracture of the neck of the femur: in that fracture forcible pressure of the limb upward often fails to cause pain.

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* Read at a meeting of the Medical Society of the State of New York, Albany, Jan. 27, 1909.

A pure example of the third method can be found in fracture of the ulna, the radius remaining unbroken; the patient should be asked to extend the elbow in pressing against a fixed object. Another is to have the patient clench the hand forcibly when the internal epicondyle of the humerus is broken; the flexor muscles, being attached in part to the fragment, tend to displace it and thus cause pain. The same effort will also cause local pain in a Colles fracture by pressing the fragments together, as in the second method.

Other movements, varying with the part broken, such as voluntary abduction of the arm in fracture of a condyle of the humerus, or the attempt to lift the foot from the bed in fracture of the leg, will cause diagnostic local pain in various ways, and one single maneuver, namely, pressure upward against the ball of the foot while the patient resists, will often suffice to exclude in a moment fracture of the thigh, leg and foot. If this causes no pain it can confidently be assumed that no bone of the foot is broken and that the femur and tibia are not broken across. As a ready means of gaining information promptly and of avoiding mistakes this methodical search for pain, with the correlative reduction in the reliance on crepitus and abnormal mobility, seems to me to deserve more general recognition and use than it now has.

II. OPERATIVE TREATMENT

Resort to open operation in the treatment of simple fracture, in order to effect a better adjustment of the fragments and to maintain it by suture or other means of direct fixation, has of late been somewhat increasingly practiced and recommended. This is probably to be deemed rather a part of the general increase of operative procedure which has been so marked in the last two decades than the expression of an actual need in the treatment of fractures. There are so many personal influences constantly furthering resort to operation that there is no danger that the interests of our patients will be neglected on that side, and a word of caution, a suggestion that full and deliberate consideration should be given to the reasons against such interference as well as to those in its favor, may be timely.

The old standard—promptness, safety, efficiency—the injunction that our work should be done *cito, tuto, jucunde*—is still to be met, and met not only actually, but also relatively to the results obtained in other ways.

The reason advanced in favor of the general or extensive adoption of open operation in simple fracture of the shaft of a long bone is that it assures an accurate adjustment of the fragments and its maintenance by sutures, and that in this way causes of failure of union and the drawbacks incident to the frequent permanent displacements left by other methods are avoided.

Against this claim several objections may properly be urged. Accurate adjustment of the fragments is of no great value unless it can be maintained, and its maintenance by suture or other direct fixation is, at the best, uncertain. A suture, at the most, is a protection only against lateral displacement and overriding, not against angular displacement, and only for a short time. The normal rarefying process in the bone, which must precede repair, promptly changes the adjoining ends of the fragments into soft tissue and thus weakens or destroys the grip of the suture, and the fragments again become movable on each other, although, of course, to a less degree, because they are partly supported by the condensed tissues about them.

The more ardently the surgeon tries to obtain a good fixation, moreover, the more closely he adjusts the fragments and the more tightly he ties the suture, by just so much does he add to the probability of a total defeat of his efforts, for he establishes at the fracture conditions of leverage which go far to ensure the immediate breaking of the suture by some one of those slight twists which can not fail to be given to the limb, even during the application of the first dressings of the wound. If the grip of the suture is not slack it will surely break.

The suture, then, must be slack in the beginning, and it becomes more slack, as time passes, by absorption of the bone about it; so that for the prevention of displacements we must still depend, and from the beginning, on external support and practically to the same extent as if the suture had not been employed.

Of other methods of fixation I can not now speak in detail, but practically all of them are open to the same criticism and some of them to others.

So far, then, as maintenance is concerned, support by the suture is illusory, and all that is gained by the operation is the correction of the primary displacement. What is the value of that adjustment? It appears to consist mainly, if not entirely, in the removal of interposed soft parts or small fragments which, if not removed, would delay or prevent reunion or cause persistent deformity. Such removal of possible obstacles to reunion plays a rather large part in the arguments advanced in favor of operation, but the percentage of failure of union, in all cases, is small, probably not more than 1 or 2 per cent., and in the great majority of these the cause is not the interposition of a removable object; it is either an unknown cause or the suppuration that follows an open wound. That the cause may be independent of malposition is shown by the frequency with which pseudarthrosis persists after operation to remove it. Adjustment, consequently, would be preventive in only a minority of the cases in which failure of union would otherwise occur.

The assertion that only by operation can an ideal restoration of form be obtained is one that appeals to the imagination, to the natural desire that our work shall be of the highest class and our results without blemish. But, as has been shown, direct fixation does not ensure such a result, and in the great majority of cases no better reduction can be maintained than could have been effected and maintained without operation. Moreover, most of these moderate departures from the ideal, unsightly as they may appear in a skiagram, cause no functional and little or no cosmetic loss. They consist in some lateral or some angular displacement and usually some overriding which are unrecognizable by others in ordinary intercourse and are the cause of no limitation to the patient. And, especially in the young, many of them grow less as time passes. The alleged gain is not only more sentimental than real, but is also, in fact, unobtainable.

The cases in which gross displacement exists and can not otherwise be corrected would, then, be the only ones in which operation for the purpose of reduction is clearly indicated.

Furthermore, there are certain positive disadvantages after operation which may well be deemed a counterbalance to far weightier advantages than those which are claimed for it.

1. It is, I think, certain that repair is slower after an operation in which the fragments have been tempo-

rarily still further displaced, as has to be done for the placing of a suture. The reason is, I believe, in the additional laceration of the periosteum, the destruction of the periosteal bridge which plays so prompt and important a part in the repair of a fracture, and the stripping back of the periosteum at the edge of the fracture. A delay of one or even several weeks might be of no great price to pay for a material gain, but a similar and far more important disadvantage is found in the suture or pin used to fasten the bones together. That this is in itself sufficient to cause failure of union I am convinced by many observations. It does so by exaggerating the rarefying osteitis which is a necessary preliminary to reunion and possibly by inhibiting the productive and condensing osteitis which should follow. Thus is created a gap between the fragments, which is occupied by fibrous tissue showing no tendency to change into bone, a gap equivalent in its effects to a loss of substance or to a displacement similar to that which it may have been the object of the operation to correct.

This condition is habitually observed whenever a wire suture has been applied. I have frequently had occasion to cut down on and remove such sutures, and I have always found them lying loose, all the bone originally embraced within the loop having disappeared. Many similar observations have been made with the *x*-rays. This occurrence is constant when metal is used, either as a suture or as a pin, and sometimes the loss is so great as to reduce the ends of the fragments to small, widely separated, conical points. Whether the same result follows the use of silk or silkworm gut for suture I do not know, for I have used these materials only as temporary sutures, when the wound had to remain open, and have removed them after a week or two. In other cases I have always used strong catgut, simple or chromicized, trusting to external support for the later maintenance of apposition.

2. As already mentioned, the manipulations necessary in drilling and suturing the fragments delay reunion, probably by additional injury to the periosteum. But in addition to this the added injury to the soft parts, especially when the bone is not subcutaneous, has two serious drawbacks. It exposes to suppuration to an extent which ample experience has shown to be in excess of that pertaining to other clean operations, and it notably increases the chance of limitation of motion in the neighboring distal joint by cicatricial change in the wounded muscles or by their cicatricial attachment to the callus.

This suppuration is not to be feared as a menace to the life of the patient; it is the expression rather of the bruising of the tissues than of a malignant infection, and can usually be kept in control. Its principal results are the establishment of a sinus leading to the suture or to a bit of necrosed bone and the increase of the cicatricial change in and adhesion of the muscle. The latter is the more harmful the nearer it is to the joint, but it is capable of serious results even when at a distance. I have seen complete stiffness of the knee follow an operation for failure of union after fracture of the femur at the middle, and stiffness of the elbow after an operation for wiring a fracture of the shaft of the humerus, in both of which moderate suppuration occurred.

I can not here elaborate these and other points. I shall only quote in support of some of the statements made some facts from a recent report of 2,700 fractures treated in Körte's hospital service.[1] In four fresh cases wire sutures were used; in two of them suppuration took place. In one of the others, a case of supracondylar fracture of the humerus, the range of motion left in the elbow was only 30 degrees; in a fracture of the femur coaptation was not maintained. In 27 cases (1 per cent.) union failed, and in 10 failure was anticipated after a lapse of three weeks, because of persistent displacement of the fragments. Peltersohn expresses the opinion that very few cases require operation, and says that this opinion is generally held in Germany.

To summarize, then, early operation in simple fracture is to be credited, if successful, with an exact re*adjustment of the fragments, and this readjustment,* if maintained, protects the patient against certain irregularities in the outline of the reunited bone and against such failures of union as might otherwise result from inability to make sufficient reduction. The importance of these advantages is not great; the irregularities of outline are functionally and cosmetically unimportant in the great majority of cases in which proper non-operative treatment has been used, and failure of union in such cases is not only rare, but in the majority of cases in which it occurs is due to general causes and in only a small minority to those local causes which operation can remove.

On the other side of the account is the fact that for the maintenance of this adjustment the surgeon must depend on the usual dressings, whose alleged inadequacy is given as a reason for the operation, or he must use the untrustworthy suture or other mechanical means, and all of these involve the risk of suppuration and delay in or failure of union through causes inherent in themselves. There is also the other fact that the function of the neighboring joint may be diminished or lost through the implication of its muscles in the operation and its repair.

Applying the old criteria of promptness, safety and efficiency, it appears, then, that operation is less prompt in its results and less safe, and more efficient only in a very small number of cases, and should, therefore, be reserved for those cases in which its need is clearly evident—a conclusion which, in the interest of our patients and of our art, I hope may be generally accepted.

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INTERTRANSMISSIBILITY OF BOVINE AND HUMAN TUBERCLE BACILLI

EVIDENCE OFFERED BY CLINICAL ADMINISTRATION OF TUBERCULINS MADE FROM BACILLI OF HUMAN AND BOVINE ORIGIN

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The question of the intertransmissibility of tubercle bacilli of the human and bovine *varieties* is a purely scientific one and can be settled only by carefully weighing scientific data. It was on this ground that Koch objected to resolutions being passed on this subject at the International Tuberculosis Congress, taking the stand that it was impossible to settle or add anything to a scientific question by passing resolutions.

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[1] Peltersohn: Arch. f. klin. Chir., 1908, lxxxvi, parts 3 and 4.

DIFFERENT VARIETIES OF BACILLI PROBABLY ORIGINALLY FROM ONE SOURCE

If we approach this study with the knowledge which we have derived from observations in other fields, it is not difficult for us to believe that the different varieties of tubercle bacilli originally came from one single source, but that through adaptation, the one to man, another to animals, and a third to birds, they have finally so changed that they now differ in form, method of growth, virulence toward animals and other characteristics. It is not at all improbable that this change has finally become so great that the bacilli of one variety will not grow at all or only with difficulty on soil ideally suited to another variety.

Not only do we note differences between the human, bovine and avian bacilli, but also differences in type of the same variety. Doubtless part at least of the difference that we notice in various cases of tuberculosis may be due to differences in the bacilli which produce the infection in the various individuals.

It is a common observation that fruits and plants grown in different soils differ in flavor and appearance. It is also known that at times there is such variation that plants raised in one kind of soil will grow with difficulty or not at all in other soils. With this almost universal observation in the vegetable kingdom to influence us, it seems to me that we should approach the subject of tubercle bacilli with a feeling that in all robability we have distinct varieties due to long adapion to distinct soils. If we carry our reasoning still rther, we would expect that, while each variety is best suited to its own host, it is possible that it will grow at times in a different and what would be ordinarily an uncongenial soil.

A study of the bacilli from different sources shows that they differ in form, cultural characteristics, staining qualities and in their virulence toward animals.

PRIMARY INTESTINAL TUBERCULOSIS AND INFECTION OF CATTLE WITH HUMAN BACILLI

The solution of the question of intertransmissibility has seemed to hang largely on two points—the experimental production of tuberculosis in cattle by the use of human bacilli and the recovery from human beings, and especially from primary lesions in the intestinal canals of children, of bacilli having bovine characteristics.

Even these two points, when carefully analyzed, do not carry with them as much weight as might be at first thought. In the first place it means nothing to the practical solution of the problem whether human beings are able to infect dairy herds, to find that cattle become tuberculous when fed for a greater or lesser period of time on human sputum containing bacilli. Animals, like human beings, possess a certain resisting power against bacteria. If bacteria are taken into the body in small numbers, the protective substances of the body will destroy them. In doing so the protective bodies are used up; but from the stimulation of the body cells resulting from the action of the poisons liberated from the bacteria which have been destroyed the antibodies will be restored. In order to allow the body to recuperate its protective power the numbers of bacteria entering the body must not be too great. If they are introduced in too large numbers or if their virulence is too great, instead of stimulating the cells to the production of antibodies, they destroy the[illegible]. If they are not introduced in great amounts, but the infection is continuous, we can conceive of the antibodies being exhausted and the body being overcome because there is no opportunity for its recuperating itself.

Thus, the feeding of animals on human sputum for many days and months, as has been done in some experiments, may result in infection, but this is not a natural infection; it must rather be considered that the resistance of the animals has been overcome. While it shows that human bacilli can be made to produce tuberculosis in animals when the animals are forced to take them into their systems in large quantities for prolonged periods of time, it gives us no evidence whatever that animals are at all likely to become infected under natural exposure to patients suffering from tuberculosis. It is probable that any human being or any member of the bovine species can be overcome and infected with tubercle bacilli of either the human or bovine type if the subjects take the bacilli into their systems in sufficiently large quantities for sufficiently long periods of time. If it were possible to determine the dosage of bacilli necessary to produce infection in animals, a test of greater accuracy would be the injection of this dose in all instances.

The experiments which have been carried out by the various commissions seem to indicate that the human bacillus is not very virulent for cattle, and, in doses which would produce general tuberculosis if the bovine bacillus were used, it causes few if any lesions.

It being impracticable to inoculate human beings with bovine tubercle bacilli we must determine their virulence for human beings in other ways. Since bovine bacilli are most apt to be taken in through milk, and since children are largely milk-users, it has been thought that if bovine bacilli were virulent for human beings they would attack the intestines of children and cause a great deal of primary intestinal tuberculosis. The fact that primary intestinal tuberculosis in children is not a common disease is taken by the followers of Koch to mean that milk is not a frequent source of infection. When we consider the fact, however, that bacilli can penetrate the mucous membrane of the bowel and leave no lesion behind, and that tubercle bacilli inoculated through the eye, genital tract, peritoneum, etc., produce lesions in other parts of the body, notably the lungs, it would seem that we should not place too much reliance on the incidence of intestinal tuberculosis in childhood as a guide to the amount of infection produced by bovine bacilli. Sufficient evidence has certainly been collected during the past few years to make it probable that the intestinal tract affords a common portal of entry of tubercle bacilli of human as well as bovine origin. It is not improbable that many bacilli that are carried into the nasal and oral cavities by inhalation collect on the mucous membranes and are swallowed and either destroyed in the intestinal canal, excreted with the feces or absorbed through the mucous membrane. If these do not cause infection of the intestines and mesenteric glands at times, we can account for the failure only by suggesting the unenlightening hypothesis that the soil is not suitable. Be this as it may, the cultures taken from intestinal and mesenteric gland lesions in childhood showing the morphologic, cultural and inoculation characteristics of bovine bacilli have been sufficient to warrant the belief that a certain portion of these infections are from bovine sources.

EVIDENCE FROM CLINICAL OBSERVATIONS

It seems to me that clinical observations are of value in the solution of these problems. In the first place, tuberculosis manifests itself in many organs, the localization seeming to depend somewhat on the age of the patient. The course of the disease varies, somewhat, in the different locations. If we recognize that tuberculosis can be caused in human beings by bacilli of both human and bovine origin, it seems to me probable that each bacillus will produce its lesions under the conditions which are best suited to it; in fact, this is a well-established principle in bacteriology. No one can explain just why the diphtheria bacillus ordinarily attacks the tonsils, the pneumococcus, the lungs, the meningococcus the meninges, etc. We cover our ignorance by saying that the individual soil furnished by these tissues is suited to them, but just what it is in these tissues which especially fits them for the various micro-organisms we can not even conjecture. Neither can we explain why certain micro-organisms, such as the pyogenic bacteria, under different circumstances and in different tissues, produce lesions of different virulence. The question that we are discussing would be illuminated by a better understanding of these problems.

The differences in the localization and the character of the lesions in tuberculosis in childhood and adult life have been noted for a long time. The bone lesions, glandular enlargements and meningeal involvements are common to children, while pulmonary involvement is not proportionately as frequently found; in adults, on the other hand, pulmonary involvement is the most common variety, although we do find localization in many other organs, such as the larynx, bowels, glands and genitourinary tract, and infrequently in the bones, mesenteric glands and meninges. Must we account for this by the difference between the child and the adult, or must we look elsewhere for the cause? Could not the difference between the risk run by the child and the adult of being infected by both bovine and human bacilli be an important factor?

Spengler, in his study of the characteristics of bovine and human bacilli, has made the important observation that bovine bacilli grow best on culture media when they are surrounded by little oxygen, while human bacilli grow best when surrounded by large quantities of oxygen. From this he reasons that the same conditions obtain in the body; hence bones, glands, meninges and the various organs of the genitourinary tract furnish conditions most suitable for the growth of the bovine bacillus, while the lungs furnish ideal conditions for the human bacillus.

Raw has arrived at conclusions almost identical with those of Spengler in regard to the clinical distribution of those cases which he believes to be probably of human and those probably of bovine origin.

The results of certain experiments in immunizing cattle against bovine bacilli by the use of human cultures which are carried on by the German Imperial Health Board[1] offer a confirmation of Spengler's view that bovine bacilli grow best away from oxygen. Cattle which had been previously immunized against bovine bacilli by the inoculation of living human bacilli showed great resistance to infection when inoculated with bovine bacilli later. The lungs did not show foci of infection, but the meninges, eyes and genitourinary organs did. This might be interpreted as showing that the soil furnished by the meninges, eyes and genitourinary organs (all away from oxygen) is better suited to the bovine bacilli than that of the lungs, and that when the animals have been immunized the bacilli grow best where conditions are most suitable; hence choose these organs.

EVIDENCE DERIVED FROM USE OF BOVINE AND HUMAN TUBERCULINS

For the past three years I have been employing therapeutically tuberculins made from both bovine and human bacilli. My experience shows that their action differs. It is rare that a patient will do equally well on both varieties. Patients with pulmonary and laryngeal affections, as a rule, do best on bovine tuberculin, while lesions of the bones, glands, genitourinary tract, peritoneal cavity (with effusion) and ear do not improve as rapidly under its use and at times seem to be aggravated somewhat by it; on the other hand, pulmonary and laryngeal lesions do not heal so rapidly under human tuberculin as they do under bovine tuberculin, while those of the bones, glands, genitourinary tract, peritoneal cavity and ear do best on the human tuberculin. While all tuberculous lesions may be treated more or less successfully by tuberculins of either variety, yet my experience leads me to conclude that best results are obtained when we have at our command remedies made from both varieties of the bacillus.

Regarding the subject of localization, I do not think that it is possible to draw our lines too tight. For example, when I say that glandular tuberculosis is most likely to be of bovine origin I do not deny that both varieties of bacilli are found in the glands, nor do I doubt that both are capable of producing tuberculosis of these organs, but I do believe that we are justified in concluding that the glandular tissue is suited to the bacillus of bovine origin, and hence that active lesions found here are most apt to be due to the bacillus of bovine type.

When we have gathered together all the facts that have been brought out during the past few years relative to bovine and human tubercle bacilli, I believe that we are warranted in assuming that these bacilli are not only different, but antagonistic, and that infections from the two varieties of bacilli are either not likely to occur in the same individual at the same time, or, if they do, are likely to be infections of low virulence owing to the antagonistic action of the two. That this action is a true antagonism does not seem probable to me, but rather that it is to be explained by the action of the less virulent bacilli from the areas of bovine infection furnishing the stimulation for the cells which calls forth the immunizing response against the more virulent bacilli and toxins of human origin. In infections in cattle the opposite would occur and the less virulent human bacillus would call forth the action of the immunizing machinery against the more virulent bovine bacillus. In support of this view I offer the following observations:

THE ANALOGY OF SMALLPOX AND COWPOX

Cattle are immunized against bovine bacilli by inoculation with human bacilli, and if the inoculations are made sufficiently often it is generally believed that this immunity can be made more or less permanent. In this respect we have an analogy in smallpox and cowpox. Inoculations of human beings with the virus of cowpox immunizes against smallpox, and I am told on good authority that smallpox, *although transmitted* to cattle with great difficulty, protects them against cowpox. Now might we not go one step further and, reasoning from analogy, suppose that from bovine bacilli a virus may be obtained which will protect human beings from infection with human tubercle bacilli? If we are right in assuming that tuberculous lesions of the bones in early childhood are infections of bovine origin we have observations to warrant an inference that these are examples which point to the probability of these early bovine infections conferring immunity to infections from the human bacillus, for we have all observed that pulmonary tuberculosis does not occur as often as we would expect in patients who have had bone lesions in early life. We are compelled to admit that by the use of milk which contains a few bovine bacilli many children may secure a degree of immunity which protects them against infections from human bacilli; and this may be a factor in reducing the tuberculosis mortality during early years.

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[1] Tuberk. Arb a. d. k. Gsndhtsamte. No. 7, 1907.

On this point it would be interesting if we knew the experience of Japan. Kitasato has shown us that pulmonary tuberculosis is just as common in Japan as in other countries, although the Japanese are not a milk-using nation, and their native cattle do not suffer from tuberculosis. This experience of Japan has been used as an example to show that tuberculosis is not, as Behring would make us believe, entirely of bovine origin. Now, a careful analysis of these conditions might furnish us with further important evidence, for if it can be shown that tuberculosis is more virulent in Japan, or that it is more virulent in the early years, it might be argued that there is a certain degree of immunity against human tubercle bacilli conferred by bovine bacilli which are ingested with milk and other dairy products. This same immunity can be and doubtless is conferred, though I believe with greater danger (for, the human bacilli being suited to human soil, infection from them is more likely to occur than from bovine bacilli) by children taking in human bacilli in small numbers; for, with our conception of immunity, we must assume that a stimulation of the machinery of immunization always occurs when bacteria are taken into the system, and that when they are taken in in quantities short of what is necessary for infection to result a certain heightening of the patient's resisting power occurs, which results for the time in an increased immunity on the part of the individual.

BOVINE TUBERCULOSIS DANGEROUS

It can not be argued on these grounds that it is useless to take measures against tuberculous cattle and milk, for the numbers of bacilli in these articles of food can not be measured and no guarantee can be given that infection will not occur. In fact, those infections which seem to be probably of bovine origin, such as tuberculosis of the bones, meninges, mesenteric glands and intestines in children, together with infections of the ear and genito-urinary tract, make up about one-tenth or one-twelfth of all cases of tuberculosis, and we can not afford to be careless of any conditions which have such frightful morbidity and mortality, even though in some instances in which infection does not occur a certain degree of immunity may be conferred.

BOVINE AND HUMAN TUBERCULOSIS IMMUNIZE AGAINST EACH OTHER

The reason that we may suppose bovine tubercle bacilli are better able than those of the human variety to confer on human beings immunity against infection from human bacilli, is that they have been grown on the culture medium furnished by the cow and consequently are not so well suited to that furnished by human beings; therefore, they are less virulent to human beings and can be taken into the human system in larger quantities without producing infection, and probably in large enough quantities to produce a considerable degree of immunity. The same explanation holds for our ability to immunize cattle with human bacilli.

Clinically we have found that it is best to treat those infections which we believe to be produced by human bacilli with tuberculins made from bovine bacilli and those infections that we believe to be of bovine origin with tuberculins from human bacilli.

I offer the following theoretical suggestions as a possible explanation in support of this observation. The bacilli of bovine and human varieties are originally from one parent stem and very closely allied, yet different. The toxins which they produce differ, yet they are so near to each other that each one is able to stimulate the physiologic machinery of immunization and cause the production of specific antibodies which are, perhaps, active against the entire group of tubercle bacilli. The advantage of treating a given infection by the tuberculin made from the other variety of bacilli is that the toxin introduced into the system is not the same as the one which is already producing the symptoms of the disease, yet is so similar that it stimulates the cells to the production of the proper specific antibodies, thus furnishing protective substances without increasing toxic effects.

My clinical experience with bovine and human tuberculins shows not only that they differ, but also, if I interpret my observations correctly, that certain patients are improved by one and irritated by the other; also that very few patients do equally well on both preparations, and that when the preparation is suited to the case the increase in dosage can be made much more rapidly than with the other preparation. The preparations which I have used most extensively in this test have been P.V. and T.B.V. (Spengler), which are a combination of the endotoxins and the soluble toxins standardized in terms of the solid extract. When the vaccine is properly suited to the case I can often advance from an initial dose of 0.000,0001 mg. to 0.01 or 0.02 mg. of the solid extract in a period of from four to six weeks without the production of any temperature reaction. Coincident with this rapid increase in dosage there is usually a general decrease of symptoms and improvement of the patient.

Occasionally I find a patient with pulmonary tuberculosis in whom under P.V. (bovine vaccine) the sputum and cough will rapidly decline, but when T. B. V. (human vaccine) is given both sputum and cough will increase at once. In several cases in which both pulmonary and glandular involvement were present, I found it difficult to treat the patient because the glands were irritated by the P.V. while the lungs were benefited, and the lungs were irritated by T.B.V. while the glands were greatly benefited by it. In one very instructive case the cough greatly diminished and the sputum dropped from 100 c.c. to 50 c.c. under P.V., but the deep cervical glands became swollen and painful so that a mass as large as the fist presented. I changed the vaccine at once to T.B.V.; and, after the second injection, one of 0.000,0001 mg., and two days later, one of 0.000,001 mg. the pain disappeared and the skin over the gland was wrinkled. Coincident with the improvement in the gland there was a decided increase in cough and expectoration, showing that the pulmonary condition was not so satisfactory. To show that this was not coincident, when the glands had nearly disappeared, I again changed to P.V., when they promptly began to swell and the cough and expectoration just as promptly began to improve. After some time we secured an apparent healing of the gland, after which the patient bore the P.V. without any difficulty and to the greatest benefit of the pulmonary condition. My belief is that this case was one of double infection, consisting of a human infection of the lungs and a bovine infection of the gland. It is also of interest to record that the case was not one of great virulence.

The experience of one vaccine irritating while the other improves the lesion is a very common one with me. I believe that it throws light on the subject of the bovine and human infections. One other especially instructive case was that of a patient with both pulmonary and renal involvement. The patient did splendidly on watery extract (von Ruck), a preparation of human bacilli, but I changed to P.T.O. (Spengler), a bovine vaccine, and 0.000,01 mg. caused a violent reaction with renal colic and hematuria. On returning to the use of watery extract the patient was apparently cured.

CONCLUSIONS

Interpreting laboratory findings, animal experiments, clinical observations and the diagnostic and therapeutic use of tuberculins made from bacilli of both human and bovine varieties, as well as reasoning from the analogy between smallpox and cowpox, I feel that we have some light thrown on the question of intertransmissibility of tubercle bacilli of human and bovine origin that can not be derived from the laboratory and animal experiments alone.

The following points in the discussion of this question seem to be pretty thoroughly established:

1. Human and bovine tubercle bacilli are different, as shown in: (a) morphologic characteristics, (b) cultural characteristics, (c) virulence for animals, (d) staining characteristics (not generally confirmed).
2. Cattle can be immunized against bovine bacilli by inoculation with moderate numbers of human bacilli.
3. The resistance of cattle can be overcome and infection brought about by inoculation of human bacilli in large numbers or in moderate numbers if the inoculations are kept up for a prolonged period of time.
4. Human beings are sometimes infected with bacilli of bovine type.

Reasoning from the data obtained from the diagnostic and therapeutic use of tuberculins made from bacilli of bovine and human types, we conclude that:

1. Bovine and human bacilli are different in that their toxins are different.
2. Judging from the manner in which patients suffering from tuberculosis react toward tuberculins made from human and bovine bacilli, we would conclude that both varieties of bacilli are able to produce tuberculosis in the human body, but that the localization of the two infections is more or less constant. We have found that:

A. Infections of the lungs, larynx and intestines, when complicating tuberculosis of the lungs, are, as a rule, best treated by tuberculins made from bovine bacilli. These infections are most probably produced by bacilli of human origin.

B. Infections of the bones, glands (as a rule), peritoneum (with effusion), ear and genitourinary tract are, as a rule, best treated by tuberculins made from human bacilli. These infections are most probably produced by bacilli of bovine origin.

Reasoning from the analogy furnished by smallpox, the fact that human bacilli will immunize cattle against infection with bovine bacilli would suggest that bovine bacilli might immunize human beings against human bacilli; and, if our belief that tuberculosis of the bones is of bovine origin is true, and our observation that persons suffering from bone lesions rarely suffer from tuberculosis of the lungs is correct, we have clinical evidence which supports the fact that immunity in human beings against human bacilli may be produced by infection with bacilli of the bovine type.

THE INCIDENCE OF TUBERCLE BACILLI IN NEW YORK CITY MILK

WITH A STUDY OF ITS EFFECTS ON A SERIES OF CHILDREN *

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One of the most important questions to-day which confronts those fighting the spread of tuberculosis is: What proportion of infection is human, what proportion bovine in origin? It is not necessary for me to review in this place the various answers that are given this question by sincere and capable workers in the same or different countries. In the United States we find Theobald Smith[1] stating that, in his opinion, not over 1 per cent. of human tuberculosis is of bovine origin, and, on the contrary, others — for example, Ravenel[2]—believing that a considerable percentage of the disease is of this origin. The British Tuberculosis Commission recently reported that "a very considerable amount of disease and loss of life, especially among the young, must be attributed to the consumption of cow's milk containing tubercle bacilli." The opposite view of Professor Koch is known to all. In view of such conflicting statements on a subject of such vital importance, physicians and laymen are, at the present time, undecided whether they should concentrate their energies against the dangers from the tuberculous individual, or whether they must guard against a dual source of infection. Prophylaxis suffers from this indecision.

SCOPE OF THE INVESTIGATION

My work was undertaken with a threefold object: 1, probing one of the elemental phases of this broad question, to ascertain how often milk supplied to a large city, such as New York, contains virulent tubercle bacilli; 2, to study the nature of these bacilli, to learn whether they conformed uniformly to the bovine type

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* From the Research Laboratory, Board of Health, New York.

* Read at the New York County Medical Society, Nov. 23, 1908.

[1] Smith, Theobald: The Channels of Infection of Tuberculosis, Boston Med. and Surg. Jour., Sept. 26, 1907.

[2] Ravenel: Etiology of Tuberculosis, Am. Jour. Med. Sc., October, 1907.

as was to be expected considering their source; and, finally, 3, to report on the health of some children who consumed milk containing virulent bacilli.

I realized that the presence of tubercle bacilli in milk did not necessarily furnish an index of the frequency of infection of those who drink such milk. Nevertheless, it shows the frequency of exposure to this infection, so that it is important that we should at the outset have an approximate idea of the incidence of such bacilli in the market milk. I found experiments of this nature surprisingly few in number and conflicting in results. The milk of New York City had never been investigated in this particular, and examinations which had been made elsewhere were, in the main, incomplete or dated back to a period when our milk was obtained under quite different conditions from those which exist at the present time. However, since I began this investigation more than a year ago, a comprehensive report of the tuberculous contamination of the milk supply of the city of Washington has appeared,[3] to which I shall refer in detail. The literature of this subject will be found well abstracted in this publication.

As I have mentioned, the second part of my investigation consisted in isolating in pure culture some of the tubercle bacilli found in the milk, and in differentiating them according to type. This was undertaken in order to learn whether all the cultures would prove to be bovine, or whether possibly we might find human or intermediate varieties. It seemed also desirable that more strains should be isolated from bovine material, in order to judge more certainly of the distinction between the two types of bacilli.

The material was obtained in the following manner: In the tests of raw milk, specimens were gathered only from the large forty-quart cans and not from bottled milk. This was done, partly because the facilities of the health department rendered it simpler, but more especially because more than one-half of the milk sold in New York is not bottled, but constitutes the so-called "loose milk." The fact that unbottled milk forms such a large proportion of the municipal supply is sufficient in itself to warrant its selection as a basis for examination. Furthermore, loose milk and bottled milk are frequently identical, are dispensed by the same dealer and derived from the same dairy. The specimens were collected in the same manner as those brought to the laboratory twice a week for general bacteriologic examination. I used the same sterilized one-ounce bottles with a tight-fitting tin cap. The milk was taken indiscriminately from grocery stores, dairies and large plants in various quarters of the city. Two specimens were dipped out from each can, one for the bacterial count, another for examination for tubercle bacilli. Six to twelve were collected at a time for my purposes, although one hundred were obtained by the inspectors for general examination. In most cases I obtained the milk myself, and my selection was guided merely by an attempt to obtain specimens from dealers who had small children who drank this milk in a raw state. This was done with the object of determining the subsequent health of these children, which study forms the basis of the third part of this paper.

INVESTIGATION OF TUBERCLE BACILLI IN MILK

In the laboratory the specimens were kept in the refrigerator. Before being opened they were thoroughly shaken and then 10 c.c. of milk were removed by means of a sterile pipette and transferred to a small tube, in which it was centrifuged from five to seven minutes. Two smears were made from the surface of the cream which formed a solid layer at the top of the tube. The entire cream layer, which varied in amount, was removed by means of a sterile copper spoon and placed in a Petri dish. The skimmed milk was poured away and disregarded, with the exception of the lowest cubic centimeter, which was poured into another dish. Two smears were made from the dregs in the centrifuge tube.

These two portions of milk, the cream and the lowest cubic centimeter, were drawn into small antitoxin syringes and injected into two guinea-pigs. It was necessary to dilute the cream with a small quantity of salt solution in order to render it fluid. As far as possible unused pigs of medium weight were employed; in many instances, however, I had to use larger pigs which had served as tests for diphtheria antitoxin. In order to make certain that such pigs were not previously tuberculous, autopsies were performed on fifty which had been used in this work. In no instance was any tuberculous infection encountered. In the early tests the inoculations were made into the muscles of the thigh, following the recommendation of Ostertag.[4] Later, however, subcutaneous inoculations into the groin were resorted to, as the disadvantages of the intramuscular method outweighed its advantages. It was found that the deep injections at times gave rise to hematomata at the site of inoculation, that they were sometimes followed by sudden death, and that the inguinal glands enlarge less markedly than when the pigs were inoculated subcutaneously. For each inoculation a different syringe and needle were used. The pigs inoculated on the same day were kept in the same cage. Very few abscesses developed, probably owing to the fact that almost three-quarters of the inoculations were made deep into the muscles; those which did form did not ulcerate through the skin. The animals were examined twice a week. They were not killed after a definite period, but in some instances, in which cultures were not desired, they were allowed to live long after they were known to be tuberculous. In this way we could judge somewhat of the dosage and the virulence of the tubercle bacilli in the milk.

One hundred and twelve specimens of raw milk were tested in the manner described, but as in five instances the animals died within two weeks of inoculation or were lost in other ways, only 107 came under consideration. Table 1 gives a summary of the results. Nineteen specimens were found to contain tubercle bacilli. It was found, however, on tracing all these samples to their source, that two were duplicates, so that we must consider that the positive inoculations numbered only seventeen. Thus the figures resolve into seventeen positive tests out of 107, which means that 16 per cent. of the milk contained tubercle bacilli.

In every one of these seventeen cases, as well as in the two duplicates, tubercle bacilli were found in the guinea-pig at autopsy. The case was looked on as negative unless the bacilli were shown to be present. For example, the autopsy of pig 436, killed three months after inoculation, reads as follows:

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[3] Anderson: U. S. Hyg. Lab. Bull. 41.

[4] Ostertag: Untersuchungen über die klinische und bakteriologische Feststellung der Tuberkulose des Rindes, 1905.

Somewhat emaciated, large bilateral inguinal glands; mesenteric glands hard, size of small marble; slight enlargement of iliac and retroperitoneal glands; spleen three times normal, containing a caseating abscess, and miliary tubercles. Liver showed miliary tubercles, lung negative.

TABLE 1.—DATA OF TUBERCULOUS MILK SPECIMENS.

Date.	Tuberculous Specimens.	Tuberculous Sediment or Cream.	Bacteria per c.c.	Designation of Wholesaler.	Wholesalers Who Sell Similar Milk in Bottles.
10/24	1	*Sediment.	390,000	A	0
11/7	1	Sediment.	4,800,000	B	1
	1	Cream and Sed.	80,000	C	1
11/12	1	Cream.	170,000	W	1
	1	Cream and Sed.	90,000	W	1
11/19	1	Cream and Sed.	80,000	E	1
	1	Cream and Sed.	00000,000	B	1
11/25	..	....	....	..	..
12/5	1	Sediment.	50,000	O	0
	1	Cream.	1,400,000	G	1
	1	Cream and Sed.	20,000	B	1
	1	Cream.	60,000	B	1
	1	*Sediment.	00000,000	B	1
12/19	..	....	....	..	..
12/26	..	....	....	..	..
12/31	1	*Sediment.	00000,000	E	1
	1	Cream and Sed.	8,000,000	H	0
	1	*Cream.	230,000	B	1
1/6	1	Cream and Sed.	160,000	J	1
	1	Cream and Sed.	180,000	J	1
	1	*Cream.	60,000	J	1
	1	Cream and Sed.	00000,000	J	1
	19				
Excluding duplicates...	17				

* Animal inoculated with other part of milk lost or died.

At the time of autopsy these lesions were considered definitely to indicate tuberculosis, but as bacilli could not be found, and reinoculation tests proved inconclusive, the case was rejected. In most instances reinoculation into a second series of pigs was made (Table 2).

TABLE 2.—DATA OF MILK INOCULATIONS

Date.	No. Samples.	No. Pigs Inoculated.	No Dying within 14 Days.	Otherwise Lost.	Secondary Inoculations.
10/24	12	24	2	2	2
11/7	12	24	..	..	6
11/12	12	24	..	..	2
11/19	12	24	..	..	4
11/25	6	12	..	..	4
12/5	12	24	1	..	6
12/19	6	12	1	..	
12/26	6	12	1	1	
12/31	12	24	1	3	
1/6	10	20	4	3	2
2/5	12	24	..	1	
Total	112	224	10	10	26
Net total	107				

(In five instances both pigs were lost or died.)

In order to control the results still further and avoid the possibility of confusing the tubercle bacillus with similar acid-fast organisms, cultures were made in each instance. In those cases in which serum or egg media were not employed—in other words, in which the object was not to cultivate the tubercle bacillus—glycerin agar was used. In no instance was an acid-fast organism encountered.

The smears made from the cream and from the sediment, of which mention has been made before, showed no tubercle bacilli. In no slide could they be definitely made out, although in those instances in which animal inoculations demonstrated tuberculosis the slides were carefully examined for a second time. They showed a large number of bacteria and leucocytes, roughly about an equal number in cream and sediment, but the number was found to bear no relation to the presence or absence of tubercle bacilli in the milk (Table 1).

I next examined some "commercially pasteurized" bottled milk, making use of the same technic. Eight samples were obtained from three different plants, with the intention of using more samples should these first tests give a negative result. The dealers in this milk state that it has been subjected to a temperature of 160 F. for forty seconds. In one of the eight samples tubercle bacilli were demonstrated by animal inoculation, which proves that this method, in practice, furnishes inadequate protection. Investigation on this particular was pursued no further.

HUMAN AND BOVINE TUBERCLE BACILLI IN MILK

Before discussing the results which we have outlined above, it may be well to give a brief account of the cultures of tubercle bacilli which were isolated. The details of this laboratory study will be published elsewhere. The method used was that employed by me in former work in this field.[5, 6] For the first generation dog serum or egg medium was used. The morphology of the bacilli, facility for cultivation, and virulence toward rabbits were considered in the differentiation of the human from the bovine type. The ability of a culture to induce a fatal generalized tuberculosis in the rabbit was looked on as evidence of its being bovine in nature. Eight cultures were isolated in all; in two other cases cultures were attempted but failed. From a practical standpoint it is of importance that, although seven proved bovine in type, in one case a human strain was isolated. As far as I am aware this is the first instance in which contamination of milk with the human type of tubercle bacillus has been demonstrated. The actuality of this source of infection, therefore, can no longer be denied; it must be considered in the safeguarding of our milk supply. On the farm, at the dairy, in the retail store, in the varied path from cow to consumer, the tuberculous individual must not have access to the milk.

The percentage of milk found to contain tubercle bacilli, namely, 16 per cent., is so high that we feel that it requires further comment. It must be admitted that the milk chosen for examination, commonly known as "loose milk," is somewhat below average grade. In this fact, however, we can find little comfort, for subsequent inquiry revealed that of the nineteen tuberculous specimens fifteen were sold by dealers who furnish bottled milk coming from the same farms (Table 1). This shows that an examination of the average bottled milk would reveal very nearly the same figures. Another matter of practical interest concerns the diffusion of the bacilli throughout the milk. If several samples were taken from the same can, would all or only some show the presence of tubercle bacilli? This question, which was constantly in mind, was answered by a chance control experiment. In some instances the samples were taken at random from those sent to the laboratory by the inspectors. It so happened that of the 10 samples submitted on January 6, 4 proved to be contaminated with tubercle bacilli (Table 2). Recently, on inquiring into the source of these samples, it was learned that the four were taken from two cans in the same plant—in other words, that 2 were duplicates. This method of control specimens is resorted to by the Board of Health to compare the results of the bacterial counts. In this instance it served as an unconscious control of my work. Of the 8 guinea-pigs

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[5] Hess: An Examination of Excised Tonsils, Arch. Pediat., January, 1908, p. 31.

[6] Hess: Primary Tuberculosis of the Mesenteric Glands, Am. Jour. Med. Sc., August, 1908, p. 1831.

inoculated with these 4 specimens, 7 developed tuberculosis, 1 dying prematurely of a secondary infection. As only 10 c.c. of milk were used for the test in each instance, that is, less than one tablespoonful, this would lead us to conclude that these two forty-quart cans were thoroughly permeated with tubercle bacilli, and that there was little possibility of any one partaking of the milk without at the same time partaking of virulent bacilli. Some other of our results lead to the same conclusion: The fact that on November 12 (Table 1) two positive specimens were obtained which emanated from the same wholesaler, although retailed by different stores on the same block, and that on December 5 this was the case in three instances, demonstrates that a considerable portion of the milk sold by the wholesalers on those dates contained tubercle bacilli.

Without attempting a review of the literature we should like to call attention in this connection to the results of some others in similar investigations. In the comprehensive test of the milk supply of the city of Washington, reported this year by Anderson, 6.72 per cent. of the samples were found to contain tubercle bacilli, a percentage considerably lower than that which I report for New York. This wide variation can be accounted for in part by differences in the technic which was employed. In the Washington tests usually only one animal was used for each sample, and, second, the cream was not injected. Had these methods been followed, our percentage would have been considerably lower. This may be judged by the fact that of the 19 tuberculous specimens only 9 produced tuberculosis in both of the injected animals (Table 1). In 5 instances this was due to the premature death of one of the pigs. It may be said in general that the more animals used for testing each sample the greater the chance of finding tubercle bacilli. The other point of difference in technic is more important. As bacteria collect in the cream as well as in the sediment, it is evident that unless we test both portions some may be overlooked. It will be noticed that in 2 of our cases bacilli were demonstrated in the sediment alone, in 3 others in the cream alone (Table 1). The animals injected with the negative portion of these samples developed either no lesions or such as were inconclusive. Had we not injected the cream, 3 of the positive cases would have been reported as negative, which in itself would have reduced our figures from 16 per cent. to 13 per cent. Moreover, higher percentages than we have obtained have been published by others. For instance, Rabinowitch and Kempner[7] found, in an examination of 25 samples of Berlin milk, that 7 samples, or 28 per cent., contained tubercle bacilli. And again, in an examination by Macfadyen[8] at the Jenner Institute, 17 among 77 specimens, or 22 per cent., were found to be infected with virulent tubercle bacilli.

CONDITION OF CHILDREN WHO DRANK TUBERCULOUS MILK

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dealers as had children. Each store-keeper was asked whether there were children in the family, and, if so, whether they were given raw milk from the can in the store. Of the 17 dealers from whom milk was obtained which contained tubercle bacilli, 10 belonged to this category. These ten had 18 children. As Table 3 shows, 9 of these were 2 years of age or under, and only 1 over 5 years of age. The health of these children has been followed for the past year, that is, since they are known to have ingested virulent tubercle bacilli. They have been visited by me from time to time, and finally during the past fortnight 16 were tested with tuberculin and subjected to a more or less complete physical examination. The conjunctival tuberculin test was employed, as it was feared that the cutaneous test might not be permitted. The parents were told the reason for this medical supervision, and in only a few cases offered objections. The results, which are given in tabular form (Table 3) were briefly as follows:

TABLE 3.—DATA CONCERNING CHILDREN WHO DRANK MILK CONTAINING TUBERCLE BACILLI

Milk. Dealer.	No. of Children.	Age, Years.	Conjunctival Test.	Condition One Year Later.
A	2	1	—	Healthy.
		3	—	Healthy.
B	1	1½	—	Healthy.
C	2	2	—	Poorly nourished.
		4	—	Healthy.
W	3	5/12	0	Healthy.
		2½	—	
		5	+	Poorly nourished. Physical exam. and family history doubtful.
E	1	½	—	
B	1	2	+	Poorly nourished. Cervical adenitis incised 4 mos. ago. Von Pirquet positive. Family history negative.
G	3	3	—	Healthy.
		5	—	Healthy.
		9	+	Healthy. Family history negative.
B	1	5/6	0	Healthy.
B	2	1½	—	Poorly nourished.
		3½	+	Healthy. Physical exam. and family history negative.
O	2	2	—	Healthy.
		4	—	Healthy.
	18		4	

+ = positive reaction.
— = no reaction.
0 = no test.

Of the 16 children tested with tuberculin, 4 reac 2 of these were poorly nourished, but showed no def signs of tuberculosis; the other 2 were healthy. of the cases was of especial interest: This child c sumed daily a pint of the poorest milk examined (B, Table 1). She was 2 years of age, poorly nourished, and five months ago developed a cervical adenitis, which was incised at a dispensary. She reacted to both the conjunctival and von Pirquet tests. No other member of the family appeared to be tuberculous.

We realize that we can not draw sweeping deductions from an experiment of this nature. It lacks the precision of laboratory work, a weakness inherent to a test on the human subject. It may well be said that we know neither how often the children drank milk containing tubercle bacilli nor the number of bacilli consumed. In answer to this we can merely state that 10 c.c. of this milk showed the presence of virulent bacilli; that these bacilli were found to be thoroughly distributed throughout the milk, and that the children in most instances consumed a pint or even a quart of such milk daily. Moreover, as this is the only investigation of the kind which has been made, and which it seems possible to pursue, it seems worthy of consideration.

First and foremost it is evident that as almost all the children who drank the milk were later found to

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3. Anderson: U. S. ıd Kempner: Ztsch. f. Hyg., 1899, xxxi.
ncet, London, 1899, ii, 849.

be in good health, we may conclude that milk containing tubercle bacilli does not necessarily, nor even usually, excite tuberculosis. The striking frequency with which we found bacilli would of itself force this conclusion on us. For with 16 per cent. of the "loose milk" infected, if infection were coincident with exposure, it would mean that on an average every child who drank this raw milk daily for a week would show some tuberculous lesion. Tuberculin tests and postmortem examinations on infants prove the fallacy of such reasoning. On the other hand, the occurrence of a case of cervical adenitis, one of the most frequent forms of bovine tuberculosis, in an infant known to have drunk milk containing bovine tubercle bacilli, who reacted to tuberculin although surrounded by no source of tuberculous infection, is certainly suggestive of bovine infection. We hope to follow the course of this child and some of the others so as to judge of their future welfare.

It seems to us, judging from our own investigations and those of others, that, at the present time, the relation of bovine tuberculosis to man may fairly be stated as follows: 1. This type of bacillus, although less virulent than the human variety, is capable of infecting human beings. 2. Children are more susceptible than adults to bovine infection. Numerous instances of tuberculosis of the tonsil, of the cervical and of the mesenteric glands have been proved to have been incited by the bovine bacillus. Among others, Theobald Smith, Fibiger and Jensen, the German and the British Commissions, and myself,[5] have reported cases of this nature. Recently I was able to collect reports of 44 cases of undoubted bovine infection of the mesenteric glands, 41 of which occurred in children.[6] In this connection a case taken from this year's Medical Report of the County of Aberdeen, and sent to me by Dr. Adams, seems worthy of summary. A farm servant who had three daughters, aged 9, 6 and 4 years, lost the eldest on Jan. 7, 1907, with symptoms of meningitis. In the beginning of March the youngest became ill and died on the 18th with similar symptoms. An autopsy showed tuberculous meningitis and tuberculosis of the mesenteric nodes. In the cerebrospinal fluid tubercle bacilli were found. There was no history of tuberculosis on the father's or mother's side. The milk which these children drank came from one cow, which was found to have tuberculosis of the udder, and was killed and shown to be suffering from extensive generalized tuberculosis. Careful cultural examinations of bacilli from the cerebrospinal fluid of the child, as well as from the milk and from the mesenteric glands of the cow, were made by Dr. J. Milner Adams, of the University Pathological Department, and all found to be bovine in type and similar in their microscopic, cultural and pathogenic characteristics. Neither this well-studied case nor the figures given above are, indeed, sufficient to prove that bovine tuberculosis is the "great white plague" which we are all fighting, but they do show, without doubt, that this bacillus is fraught with danger to children. Even the stanchest supporter of Koch would not care to have his children drink milk from a cow which he knew to be giving forth tubercle bacilli.

As yet there is no sufficient basis for a statistical estimate of the importance of bovine tuberculosis, but we must remember that even if, with Theobald Smith, we charge it with but 1 per cent. of the total tuberculous infections, this small percentage is sufficient to establish it as a disease worthy of active recognition. To appreciate the force of the plea for recognition of such a small percentage we have but to reflect that tuberculosis claims in the United States every year approximately 200,000 persons and that the total number of infections amount to twice this number. Thus, this small percentage is sufficient to cause the yearly number of cases of bovine infection of human beings in this country to extend into the thousands. It is solely because this type of tuberculosis is submerged by the 90-odd per cent. of human tuberculosis that it is now threatened with losing its identity. If it were possible to diagnose bovine infections by clinical methods, and if the total number were grouped under a different name, instead of being included in the generic term "tuberculosis," we would have a disease of sufficient magnitude to preclude all question as to the advisability of active preventative measures. Were there as great a number of human beings infected, for instance, by the foot-and-mouth disease of cattle, the matter would be considered as requiring state or federal attention. So that, to summarize, without ever losing sight of the fact that the bacillus of the human type is the cause of the great scourge, the scourge of tuberculosis, it would seem wise, also, to regard the bovine bacillus as the cause of an unquestionable, although comparatively small number of tuberculous infections.

Finally, a word as to the practical lesson which this investigation teaches. It is not new; it has been emphasized with ever-increasing earnestness by many students of the problem. It is to be hoped, however, that the alarming degree of tuberculous contamination found in the New York City milk, and the concrete figures which I have furnished, may prove an effective argument for those who are striving with the legislators in the cause of pure milk. It may be thought that, as I used mixed milk in the tests, it is possible that the bacilli were, in many instances, given off by one infected cow in a herd and were diffused throughout the supply. We can not well fall back on this comforting explanation, when we reflect that a recent report by Moore[9] showed that of 421 herds in New York State tested with tuberculin, 302 contained reacting animals. This high percentage of disease harmonizes with the high percentage of contamination which I found in the city milk. Again, the investigations of Schroeder[10] showing how frequently feces are present in milk, and how frequently tubercle bacilli are present in the feces of apparently healthy cattle, point clearly to a widespread dairy infection. In view of these facts, it would seem wise, as an immediate safeguard, thoroughly to pasteurize or to boil all milk not coming from tuberculin-tested cows. "Commercial pasteurization" does not protect against tubercle bacilli; it should not bear the name of pasteurization, or, at most, this milk might be termed "partially pasteurized milk."

At the same time that we are carrying out these temporary expedients, those who are urging broader remedial measures, such as adequate inspection and testing of the dairy herds, should be accorded the support of physicians and laymen alike. For if New York City had been granted, instead of 47 inspectors of farms, 150 such inspectors, it is certain that 16 per cent. of the milk sold in its precincts could not be found to harbor virulent tubercle bacilli.

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[9] Moore: Can Tuberculosis be Eliminated from Cattle? New York State Jour. Med., 1908, viii, No. 5.

[10] Schroeder: The Unsuspected but Dangerously Tuberculous Cow, Bureau of Animal Industry, Cir. 118.

SUMMARY

Virulent tubercle bacilli were found in 17 among 107 specimens, that is in 16 per cent. of the milk retailed from cans in New York City. These bacilli were not demonstrable by direct microscopic examination, but were proved to be present by means of animal inoculation. Cream as well as sediment was found to harbor these organisms, so that in all experiments of this nature these two parts of the milk should be used in making inoculations.

Tubercle bacilli were likewise found in a specimen of "commercially pasteurized" milk, showing that this method, as now carried out, does not insure protection in this particular. It is suggested that, as this name is misleading, only such milk be labeled "pasteurized" as has been heated for a length of time and to a degree of temperature sufficient to render it an absolutely safe food.

When the tubercle bacilli were isolated they were found to be in all but one instance bovine in type. In this instance, however, a human variety was differentiated, which shows that milk may become infected from tuberculous individuals and that this source of contamination should be guarded against.

A number of infants and young children who drank milk containing tubercle bacilli, when examined one year later, seemed to be in average health. A fourth of the number, however, reacted to tuberculin. One of these subjects was in poor physical condition and had suffered from a recent glandular infection.

Although probably over 90 per cent. of tuberculosis is due to infection from human beings, it is believed that we are not, therefore, justified in neglecting the danger from bovine infection, for even a small percentage of the infections in the United States means thousands of cases of tuberculosis.

As an immediate safeguard, milk not coming from tuberculin-tested cows should be pasteurized or brought to a boil. Many additional inspectors should be allowed for examining the herds, and, finally, all cows should be tested with tuberculin, and animals which react should be condemned or isolated.

154 West Seventy-second Street.

A CLINICAL STUDY OF THE CHILDREN OF TUBERCULOUS PARENTS *

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This report is based on the careful examination of 150 children whose parents were under treatment for pulmonary tuberculosis at the Bellevue Hospital Tuberculosis Clinic. The examinations were made as a part of the routine of the clinic work in an endeavor to supervise these families and to discover unsuspected cases of tuberculosis.

The children observed lived in tenements, in most instances under insanitary conditions and in close association with their parents, the majority of whom had pulmonary tuberculosis in an advanced stage. With few exceptions the children were sent for examination to the clinic, not because of any symptoms of which they complained, but simply as a routine procedure on the part of the visiting nurse.

Their ages varied from 2 to 15 years, with an average age of 8½ years.

BASIS OF DIAGNOSIS

The difficulty of diagnosis in such cases is easily appreciated, but as preventive work of this sort marks the line along which progress in our knowledge of tuberculosis must proceed, our endeavors to reach a definite diagnosis in these cases may be of interest and of value.

The most important factors in diagnosis may be summarized as follows:

1. The tuberculin tests.
2. Pulmonary symptoms and physical signs.
3. Sputum examinations.
4. Joint, bone and other non-pulmonary lesions.
5. Malnutrition.
6. Hypertrophied cervical lymph nodes.
7. Hypertrophied tonsils and adenoids.

A diagnosis can be reached only by a consideration of all of these factors taken together, and on this basis we have classified our cases into

A.—Positively tuberculous.
B.—Doubtful cases.
C.—Not tuberculous.

A. Positively Tuberculous Cases.—In this class are included, 1, all cases in which there are positive typical signs in the lungs or demonstrable joint or other nonpulmonary lesions elsewhere in the body; and, 2, all other cases in which there are suspicious symptoms, such as malnutrition, persistent cough or inconclusive physical signs in the lungs which react positively to tuberculin.

B. Doubtful Cases.—These include cases of, 1, all children in whom tuberculin tests were not made, who showed constitutional or pulmonary symptoms or irregular signs in the lungs, or who showed distinct malnutrition without any other symptoms or physical signs; and, 2, those of all apparently healthy children who react to tuberculin.

C. Non-tuberculous Cases.—We have placed in this class, 1, all cases in which tuberculin tests were made and in which there was no reaction; and, 2, all cases in which no tuberculin tests were made and in which the children showed no symptoms or physical signs and were of normal weight for their age.

It is immediately evident that in a large number of cases we have employed the tuberculin tests as the determining factor in diagnosis. Our reason and justification for so doing will be discussed later.

RESULTS

Of the 150 cases examined, the results according to the above classification were as follows:

1. Positively tuberculous, 76 cases, or 51 per cent.
2. Doubtful, 31 cases, or 20 per cent.
3. Not tuberculous, 43 cases, or 29 per cent.

These results, showing that more than one-half of the children examined were positively tuberculous, are so astonishing that they can be accepted only after the most rigid scrutiny of the methods which we have employed. This we have attempted to accomplish by careful analysis of our findings, studying separately each of the various factors which have been used in establishing the diagnosis.

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* Read before the Children's Section of the International Tuberculosis Congress, Washington, Sept. 21 Oct. 12, 1908.

FACTORS IN DIAGNOSIS

1. *The Tuberculin Tests*

One hundred and thirteen of our subjects were tested with the ophthalmic and the cutaneous tests. In 38 of these cases the results of the ophthalmic and cutaneous tests were controlled by the hypodermic tuberculin test.

The ophthalmic test was made with a 1 per cent. solution of crude tuberculin in sterile salt solution, following closely the method and system recommended by Baldwin.

For the cutaneous test we used varying strengths, 10 per cent., 25 per cent. and 50 per cent. of crude tuberculin in sterile salt solution. Only the results obtained with the 10 per cent. and 25 per cent. solutions are, however, considered here. In no case in which the 50 per cent. was positive was the 25 per cent. negative.

In the hypodermic method we have considered 5 mg. as the maximum diagnostic dose, and in the great majority of our cases in which reactions were obtained it was not necessary to go above 1 or 2 mg.

Of the 113 children tested with tuberculin, 74, or 65 per cent., reacted positively.

In 95 cases the ophthalmic and the cutaneous tests were made in the same individual. The results of these two local tests were identical in all cases but 10. In 9 of these cases a cutaneous reaction occurred without any corresponding ophthalmic reaction. Four of the children were subsequently tested hypodermically and all reacted.

In the remaining case, which was that of an overgrown boy of 15 years, the eye reaction occurred without a skin reaction. This suggests a confirmation of the general impression that the cutaneous test is more reliable in children than in adults.

Recurrence of the local reaction both in the eye and in the skin during a reaction to the hypodermic test, given from three to five weeks later, was noticed in several cases.

We have been fortunate in encountering none of the permanent or serious injuries from the ophthalmic tests which have been reported by other observers, but some of our reactions were very severe and prolonged. Only one skin reaction was sufficiently severe to cause discomfort to the child. This one went on to slight suppuration and the formation of crusts resembling closely the vaccination pustule. In this case, however, we could not positively eliminate the possibility of a secondary infection from scratching.

Since we have employed the scarifier, suggested by von Pirquet, our cutaneous reactions have been on the average less severe.

Comparative Value.—The ophthalmic test is more apt to meet with resistance from the child, and in the case of such resistance it can not be performed as carefully and thoroughly as the skin test, which, of course, militates against an accurate result. This is especially true in case the child cries. Under these circumstances a considerable portion of the fluid instilled will be washed out of the eye. This reaction, moreover, is frequently very transitory, disappearing within twenty-four hours, and in the event that the child does not return within that time for examination, the possibility that a positive reaction has escaped notice always remains.

To accept a parent's statement as to the results of the test is, of course, to render its value entirely negligible. Even to have a nurse visit the homes, either of all the patients tested within the first twenty-four hours, or simply the homes of those children who do not present themselves for examination at the clinic at the time ordered, is not satisfactory or reliable. The diagnosis of a reaction, which is at times so delicate as to be influenced even with a trained physician by the "personal element," should be made only by the physician himself.

The cutaneous test, on the other hand, is open to none of these objections. It can be detected in the great majority of cases for at least five to seven days after the inoculation, and in well-marked cases pigmentation and scars remain at the site of the inoculation for a considerably longer period. Moreover, in a certain number of children who are seen early after inoculation a skin reaction occurs without a corresponding eye reaction.

The following facts seem to justify us in considering a positive skin reaction as presumptive evidence of tuberculosis in children:

1. Of 9 children with positive typical physical signs of pulmonary tuberculosis in whom the test was made, all reacted.
2. Of 73 children with suspicious pulmonary symptoms, 80 per cent. reacted. Of 40 children without such symptoms only 40 per cent. reacted.
3. Of those with physical signs in the lungs, both typical and atypical, 82 per cent. reacted; of those with no physical signs, only 48 per cent.
4. Of those whose nutrition was below par and had in addition cough and physical signs in the chest, 88 per cent. reacted. Of those children of normal weight and without pulmonary symptoms or physical signs, only 25 per cent. reacted.
5. In the 38 cases controlled by tuberculin injections there was no discrepancy between the cutaneous and the hypodermic tests in any case. Nine of these subjects were negative and 29 positive to both tests.

It should, of course, be borne in mind that not every subject reacting to the local tuberculin tests is necessarily in need of active treatment as a case of tuberculosis, though such cases should be kept under careful observation. Given a tuberculin reaction in an apparently healthy child, the course to be pursued should depend on the course of the case under close supervision.

2. *Pulmonary Symptoms and Physical Signs*

Eighty-seven of our children, or 58 per cent. of all, gave a history either of protracted cough or of coughs and colds recurring with unusual frequency. Of these 87 a positive diagnosis of tuberculosis was made in 65 per cent.

Seventy-three children had abnormal physical signs in the lungs, and of these 72 per cent. were positively tuberculous according to our classification.

On analyzing the physical signs it is interesting to note that only 15 children had the apical signs usually accepted as being typical of pulmonary tuberculosis in adults, and that all of these 15 children were over 9 years of age. The other 58 children had physical signs which have not been generally accepted as typical of pulmonary tuberculosis in children, or, we might say, as of even suggesting it.

The most important of these signs are fine localized subcrepitant râles situated in some portion of the lungs other than the upper portion of the upper lobes. These râles were present in 35 cases and occurred usually without any change in the percussion note or breath sounds.

In most instances, 28 cases out of the 35, they were found in the region of the nipples, usually in the fifth or sixth intercostal spaces just without the mid-clavicular line. In two-thirds of the cases they were on the left side. In a few cases they occurred on both sides.

These râles differ very decidedly from the râles of atelectasis in that they do not disappear on coughing or deep inspiration. In most instances they are constant, being heard consistently on several repeated examinations. In a few instances they were inconstant or were developed during the course of a tuberculin reaction. In almost no cases, however, were they audible over a period of several months' duration.

The area over which these râles were distributed varied from that which could be covered by the bell of the stethoscope up to that larger than a silver dollar. In a few cases a gradual decrease in the size of the area or a diminution in the number of the râles heard over any one area could be traced in conjunction with the improvement of the particular case under treatment.

The presence of these râles we consider very suggestive of a tuberculous focus in this situation, the infecting bacilli probably being carried to this point by the lymphatics from the bronchial glands about the root of the lung.

We have not attempted to decide what might be the extent or exact character of the pulmonary lesion which these physical signs represent. Autopsy reports on infants and young children dying from pulmonary tuberculosis show that marked discrepancy between the physical signs and pulmonary lesions very frequently exists, so that it would be hazardous to predicate from the physical signs what the exact pathologic findings might be.

Careful *x*-ray examinations might be of service in such cases, and we are planning to have such examinations made in the future.

In addition to the 35 children who showed these fine râles above described, there were in our series 23 who exhibited sibilant and sonorous râles over the lungs. These râles were localized in various portions of the chest in 10 cases. In the other 13 cases they were more or less generally distributed.

Of these 58 cases with atypical signs, that is, with the localized subcrepitant râles and the sibilant and sonorous râles, signs which are not generally accepted as typical of pulmonary tuberculosis, a positive diagnosis of tuberculosis was made in 39 or 67 per cent. Nine subjects were considered doubtful, and 10, or 17 per cent., were not tuberculous. Further analysis shows that of the 35 cases in which there were localized fine râles a diagnosis of positive tuberculosis was made in 74 per cent., and of those with fine râles near the nipples in 82 per cent. Ninety-two per cent of these children on whom tests were made reacted positively to tuberculin. Of the 23 children who had sibilant and sonorous râles, 56 per cent. were considered positively tuberculous. In 10 of these cases these râles were localized, and here 80 per cent. were tuberculous, as against 35 per cent. of the remainder in which the râles were generally distributed over the chest.

Considering the constitutional condition and the pulmonary signs together, we find 39 cases in which abnormal physical signs and general malnutrition were associated. In these 31 children, or 79 per cent., were tuberculous, 2 were doubtful and 6 not tuberculous.

We believe that the physical signs in the chest above described as being atypical signs of pulmonary tuberculosis are found sufficiently frequently in children to warrant their acceptance as very significant in weighing the question of a diagnosis of tuberculosis. Taken in connection with the tuberculin tests, they produce a definite clinical picture in many cases. If this is true, it undoubtedly follows that pulmonary tuberculosis in children is far from being an uncommon form of the disease. The course of the disease in these cases is not at all that which is usually described as being the common one in tuberculosis in children. The symptoms as well as the signs are few, the progress of the disease very slow, and both signs and symptoms clear up in a majority of cases under appropriate treatment, that is, taking the children out of school and keeping them in the open air.

The frequency with which we have encountered these cases suggests strongly the possibility that it is these cases in which the tuberculous lesion, remaining latent during childhood for many years, may break out into adult phthisis later in life. This hypothesis would fit in very well with modern notions of the frequency of tuberculous infection during childhood. Certainly in this series of cases those children who reacted to tuberculin showed more often these pulmonary signs and symptoms than any other evidence of disease elsewhere in the body.

3. *Sputum Examinations*

Very few of the children expectorated and sputum examinations were made in only 16 cases. In only one of these were the tubercle bacilli found. In a few cases the method advocated by Holt, of exciting a cough and catching the sputum brought into view on a swab, was attempted. In no instance did it give a positive result.

These findings do not accord with those recently published by Holt and others. Their patients, however, were in hospital wards and were acutely sick, many of them finally dying of the disease. Ours, on the other hand, were only slightly ill, their parents usually not being aware that there was anything wrong with their children except perhaps that they were delicate or poorly nourished.

It is possible that by the inoculation of guinea-pigs by fresh specimens of sputum from these cases a larger number of positive results might be obtained. It is our hope to carry out some investigations along these lines during the ensuing year.

4. *Joint, Bone and Other Non-pulmonary Lesions*

Ten children in whom the diagnosis of tuberculosis was made showed evidence of tuberculous lesions elsewhere than in the lungs.

In 2 cases there were scars in the neck anterior to the sterno-mastoid muscle. These resulted from the closure of sinuses of previously suppurating glands, presumably tuberculous, inasmuch as the suppuration did not occur at the time of any acute infectious disease. In one of these cases pulmonary signs were present. Both children reacted to tuberculin, to the hypodermic as well as to the local tests.

Five other children each had one or two markedly enlarged cervical glands which were considered tuberculous, and one of these had pulmonary signs as well. Tuberculin tests were made on the other 4 children without pulmonary signs. All 4 reacted.

Of the 3 remaining children, 1 had tuberculosis of the hip, 1 had a tuberculous dactylitis and a scar resulting from a tuberculous ostitis of the radius, and the last had tuberculous peritonitis and enteritis. The last had pulmonary tuberculosis as well. All three reacted to tuberculin.

In view of the opinion generally held concerning the relative frequency of pulmonary and other forms of tuberculosis in children, it is worthy of note that out of 76 cases of the disease chosen at random, but 10 of them should show non-pulmonary lesions, and even more so that but 7 of these, or but 8 per cent. of the total number of cases, should show tuberculous lesions without any pulmonary involvement.

5. *Malnutrition*

One hundred and seven children of our 150 were under the standard weight for their age. Of these, 62, or 58 per cent., were tuberculous; 19, or 18 per cent., were considered doubtful, and 26, or 24 per cent., were non-tuberculous.

Eighty-two of the 107 were tested with tuberculin; 56, or 68 per cent., reacted. Of 31 children whose weight was normal only 18, or 59 per cent., reacted.

Of children with symptoms and malnutrition, 48 per cent. of those tested reacted. Of children with symptoms but with no malnutrition, 36 per cent. reacted.

There were 50 children with physical signs in the lungs and malnutrition. Of 42 of these tested, 36, or 85 per cent., reacted. Of 21 with signs in the chest and without malnutrition, 16, or 76 per cent., reacted.

In 41 cases were symptoms and signs and malnutrition associated. Of 34 children tested, 30, or 88 per cent., reacted. Of 13 children with symptoms and signs without malnutrition, 9, or 69 per cent., reacted.

Of 24 children tested with no symptoms or signs but poorly nourished, 9, or 38 per cent., reacted. Of 8 children tested with no symptoms or signs and of normal weight, only 25 per cent. reacted.

Of these 9 children with no pulmonary symptoms or physical signs in whom a diagnosis of tuberculosis was made, there were non-pulmonary tuberculous lesions present in 5. In the other 4 cases the diagnosis was made on the malnutrition together with a positive tuberculin reaction.

From the figures given above it would appear that the presence of faulty nutrition in a child in whom tuberculosis is suspected renders the existence of this disease more probable, inasmuch as in the children suffering from malnutrition in addition to presenting symptoms and physical signs, a much greater proportion were found to be tuberculous than of the same class of children whose weight was normal.

In children who can be kept under observation over a considerable period of time an approximately stationary weight during this period is even more suggestive of tuberculosis than the mere presence of faulty nutrition, provided that in them we have any reason to be suspicious of the existence of the disease. Actual loss of weight over such a period is extremely suggestive.

In 100 cases in which the height was measured, 73 children were under the standard weight for their height. Of these 31, or 42 per cent., were tuberculous; 23, or 32 per cent., were doubtful; 19, or 26 per cent., were not tuberculous.

6. *Hypertrophied Cervical Lymph Nodes*

We have classified as hypertrophied those cervical lymph nodes which were palpable and at least the size of a small pea. Palpable nodes apparently smaller than this are not included as being hypertrophied.

In our cases we found 79 children in whom the cervical glands were hypertrophied, including 2 cases in whom scars were present, presumably from previously caseating cervical glands. Of the 79 children in whom enlarged glands were found, 60 per cent. had tuberculosis.

Enlarged lymph nodes were present in three-fifths of all those children who reacted to tuberculin, and in our subjects who showed definite pulmonary symptoms and physical signs a slightly larger proportion of those who had enlarged nodes in addition reacted to tuberculin than did those which had no such enlargement. On the other hand, of those children who had symptoms but no physical signs, only two-thirds of those who also had enlarged nodes reacted to tuberculin, while of such children who did not have enlarged nodes all reacted.

In addition we noted that hypertrophied lymph nodes were present in the same proportion of those children who had permanent physical signs and of those who did not, and that they were present in only 40 per cent. of our subjects who showed the usual typical physical signs of tuberculosis in the lungs.

7. *Hypertrophied Tonsils and Adenoids*

These were present in 65 of our cases; 31 of these children, or 47 per cent., were considered tuberculous.

They were present in only 43 per cent. of the children reacting to tuberculin, in 35 per cent. of those who had physical signs in the lungs, and in only 20 per cent. of those who had typical pulmonary signs. Of the children who gave a history of cough, 7 per cent. more of those who did not have enlarged tonsils reacted than of those with them. These results were contrary to our expectations and do not accord with the findings of several other observers. They are, of course, at decided variance with general opinion on this subject.

CONCLUSIONS

1. In the children of tuberculous parents, who live in close association with such parents, a large proportion (in our series 51 per cent.) become infected with tuberculosis.

2. The earliest manifestations of such tuberculosis are not found in the superficial glands or in the bones and joints, but in the lungs.

3. The physical signs of these early pulmonary lesions, in children under 10 years of age, are very rarely those usually found in adults, but consist more often in the presence of persistent fine râles just without the mid-clavicular line in the fifth and sixth intercostal spaces. In other cases in which persistent sibilant râles are present in varying portions of the chest, the diagnosis is doubtful, but they should be regarded with suspicion.

4. The tuberculin tests furnish the most reliable means of diagnosis of tuberculosis in children. Of these we regard the hypodermic test in doses up to 5 mg. as positively diagnostic. Of the local tests the cutaneous is more reliable in children than the ophthalmic and presents none of its possible dangers. Moreover, it has in our hands been fully corroborated by the hypodermic test, and in consequence we regard it as a reliable and safe means of diagnosis of tuberculosis in children.

5. Examination of the sputum, as usually practiced, is of almost no aid in the diagnosis of early pulmonary

tuberculosis in children. As a routine procedure it is not very feasible in dispensary practice.

6. Malnutrition is sometimes the only appreciable evidence of tuberculosis in children.

7. The presence of hypertrophied tonsils and adenoid growths in any child does not appear to incline the balance in a suspected case toward a positive diagnosis of tuberculosis. In view, however, of the varying opinions held on this subject, further investigations along the lines of the bacteriology and pathology of this subject should be made.

8. In our cases the evidence that the enlargement of the cervical lymph nodes is of aid as a determining factor *in arriving at a diagnosis of tuberculosis in children* is not conclusive.

ETIOLOGY OF FACE, NOSE AND JAW DEFORMITIES *

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In 1874 I commenced a systematic investigation to ascertain the character and determine the classification of deformities of the head, face, jaws and teeth, and I followed this by a study of the degenerate classes. Results of these researches have been published from time to time in medical and dental journals and are here summarized.

To the great anatomist, Camper, belongs the credit of first studying the human face from the scientific standpoint. His name, therefore, was given to the facial angle which still serves as a standard by which to judge lower animals. In one of his works he gives (Fig. 1) a physical observation on the difference of the feature of the rank of the human face in comparison with the face considered in profile, as the heads of apes, orangutans, of negroes and other peoples, tracing up to antique heads. He remarks that the reader will be astonished to find among his first plates two heads of apes, then a head of a negro and then one of a camel.

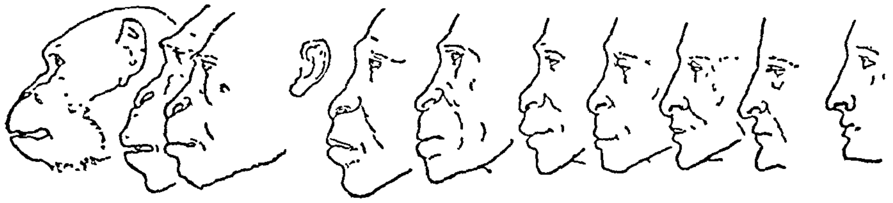

Fig. 1.—The evolution of the human face from the anthropoid ape to the ideal face described by Camper. The point of interest is the anterior brain development and the recession (degeneration) of the face and jaws

FACIAL EVOLUTION

In the evolution of the human face, commencing with the heads of apes and advancing along the line of evolution traced through heads of the higher monkey types, of negroes and of individuals of different races, we arrive at the ideal face of the Apollo Belvedere, which Camper calls an antique head. In this evolution it will be noticed that the lower face and jaws have receded and the cranium, including the brain, has gradually developed forward until the forehead, face and jaws are on a perpendicular line, as shown in the last profile of Figure 1 and illustrated in Figure 2. To prove that this evolution is still going on I have only to call attention to Figure 3. The heads shown in this figure are profile views taken from some of my patients. Commencing on the left the evolution is shown in Figure 3 as still progressing up to the head numbered 7. In the last two heads on the right atavism has occurred, which will be explained later. Starting with the negro in Figure 1, including all the heads in Figures 1 and 3, we have types of all the different races from the earliest to the most modern. By studying these illustrations, one with experience can almost determine a racial type by the cranial angles and the jaws in relation to the perpendicular line.

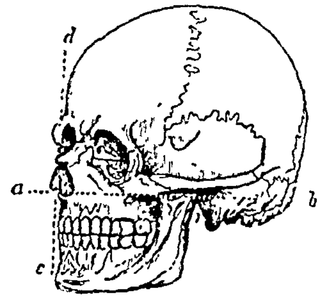

Fig 2.—A skull showing the head, face, jaws on a straight perpendicular line (the Cuvier angle) and corresponding with the last profile in Figure 1. Up to this period in man's evolution deformities of the nose are rare. *Deformities of the jaws and teeth are seldom seen.*

Comparison of the two extremes may be of value. An examination of the negro of the lower types in Mississippi, *made for me by* Dr. William Ernest Walker of New Orleans, showed that in 97.5 per cent. of the cases the jaws protruded beyond the perpendicular line. An examination of 10,000 people in the streets of London, on the other hand, revealed the fact that in only 4.13 per cent. of the cases examined did the jaws extend beyond the line; in 12.87 per cent. of the cases the jaws were on the line, and in 83 per cent. the jaws were *inside* of the line. The evolution of the Aryan race, which has taken thousands of years, is more readily understood by comparing it with the evolution of the negro in this country, which has taken place in 250 years. The importation of the negro to America placed him in a mental atmosphere different from that of Africa. Change in the character of food and the resulting ease of mastication under the law of economy of growth, caused rapid degeneration of the jaws and teeth from disuse. Intermixture with other races, together with environment, has caused the head to change from a dolichocephalic (long-headed) to a mesaticephalic (medium-headed) type. In many cases a brachycephaly (short-headedness) occurs. The forehead protrudes beyond the jaws instead of receding, thus giving the brain potentiality of development and mentality.

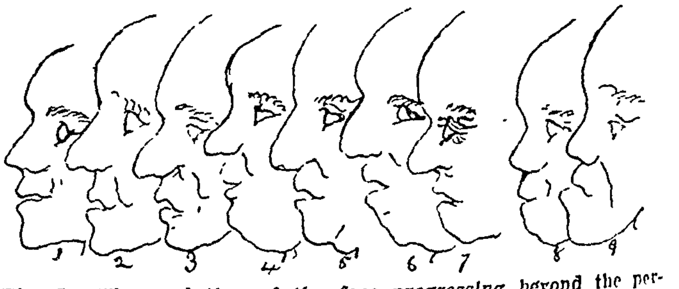

Fig. 3.—The evolution of the face progressing *beyond* the perpendicular line. The perpendicular line is to all intents and purposes the dividing line between the normal structure of the face and where the pathologic begins.

FACIAL DEVELOPMENT IN THE NEGRO

An examination was made of negroes in this country, commencing with those in Mississippi. There the percentage of jaws protruding beyond the perpendicular line, as shown in the first profile (Fig. 4) was 97.5 per cent., and only 2.5 per cent. of the jaws examined were on the line, as shown in the second profile (Fig. 4). Out of 1,000 negroes examined in Boston, on the other hand, the profile of 45.4 per cent. are represented by the first profile in Figure 4; the jaws of 35.5 per cent. were on the line, as illustrated in the second profile; and the jaws of 15.1 per cent. were inside of the line, as illustrated in the third profile. In an examination of 2,000 negroes in Chicago only six had dolichocephalic heads. The tendency is fast developing toward the mesocephalic type.

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* Read in the Section on Stomatology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

It is hardly necessary for me to discuss the subject of brain development brought about by evolution, for it is well known that mental capacity is due to the anterior development of the frontal lobes. In order that this may take place the cranium must develop anteriorly. The greater the intelligence of a race the greater becomes the frontal development. That this may take place, other structures of the head, face, jaws and teeth, under the law of economy of growth and use and disuse of structures, recede from the perpendicular line and grow smaller. In the early races the jaws measured two and one-half inches from the outer surface of the first molars, while to-day the jaws measure, on an average, only two inches. The anteroposterior measurement has diminished proportionately.

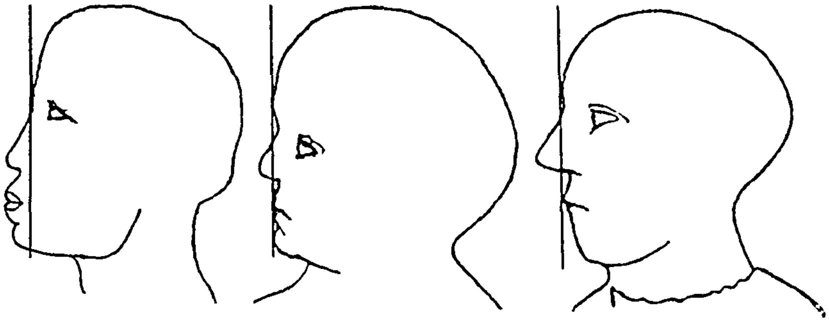

Fig. 4.—The evolution of the negro in 250 years.

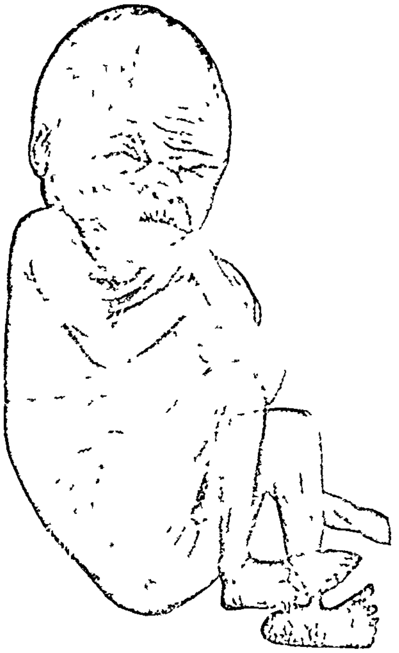

Fig 5.—A fetus at 4½ months, the first period of stress, exhibiting the simian or old man type. The wrinkled and arrested face, the long skinny limbs, hands and the flat feet approach the anthropoid ape.

MOLARS IN EVOLUTION

In normal jaw recession the teeth and alveolar process naturally undergo changes to adapt themselves to the new environment. The teeth change their shape. Instead of being bell-crowned the approximal walls are almost if not quite straight. In some cases these walls are actually straight. These changes do not take place fast enough for the receding jaws, so to assist in this adaptation the third molar teeth (which once had three distinct roots like the first and second molars) now in many cases converge into one, and the tooth is fast being superseded altogether. Some years ago I found in a tabulation that from one to all four of the third molars were missing in 47 per cent. of patients over 25 years old. The next to be superseded in the process of evolution is the lateral incisor, which is missing in about 6 per cent. of patients. With this evolution going on in the teeth the alveolar process becomes thinner on the buccal, palatal and lingual surfaces as well as between the roots of the teeth; hence the tissues are more susceptible to interstitial gingivitis.

To summarize these results: In man's evolution certain structures develop and others are lost, for the benefit of the organism as a whole. Since the face, jaws and teeth are undergoing such rapid changes, these are structures with transitory characteristics and are more easily involved in disease than any others of the body.

Fig. 6.—Arrest of the nose, face, jaws and teeth

In the development of man from the primitive cell periods of stress due to readjustment to environment occur. Those which occur during development are called periods of evolution and those after maturity periods of involution. In man's evolution certain parts disappear for the benefit of the organism as a whole; in the evolution of organisms certain organs disappear. Periods of stress occur when the functions of some organs are lost and those of others gained by development. The law of economy of growth centers around this struggle of organs or organisms for existence. Because of this fact physiologic atrophies and hypertrophies (arrest and excess in development) occur.

THE FIRST PERIOD OF STRESS

The first period of stress is the most important as far as the head, face, jaws and teeth are concerned. It is called the senile or simian period and it occurs at about the eighteenth week of fetal life (Fig. 5). This period, however, varies according to the development of the particular structure under consideration. Thus the first teeth undergo change during development at about the second month. The permanent teeth, however, begin to develop later in fetal life and the period of stress in relation thereto occurs at the time of their formation. Other structures of the body would gain or lose during their development. In man's fetal development from the cell he passes through all adult stages of lower vertebrates, fish and reptile to bird and mammal. Arrest and excess in development take place in all structures under similar conditions.

The retrogressive phase of evolution, with which Camper did not deal, underlies all pathology of the face, nose, jaws, alveolar process and teeth. The illustrations, supplementing those of Camper, portray this reverse phase, in which symmetry of the body as a whole is sacrificed to changes in the nose, jaws, alveolar process and teeth to preserve the gain in brain matter. In his evolution from the simple cell to a fully developed animal, man has developed a nervous system as a result of a loss in explosive force. How well this nervous system is developed depends on the health of the brain. The brain of man develops first, to preside over the development of the other structures. If the brain is normal, the structures of the body will develop normally; on the other hand, if from any cause the brain is abnormally developed, unstable or defective, the structures of the body become abnormal. When arrest of brain development occurs, degenerates of various classes result. The causes which bring about arrest or excess in fetal development at the first period of stress are fatigued reproductive organs of either parent but more especially of the mother. Neurasthenia or fagged-out nervous system is due to excesses in eating or drinking and to habits, worries and uncertainties.

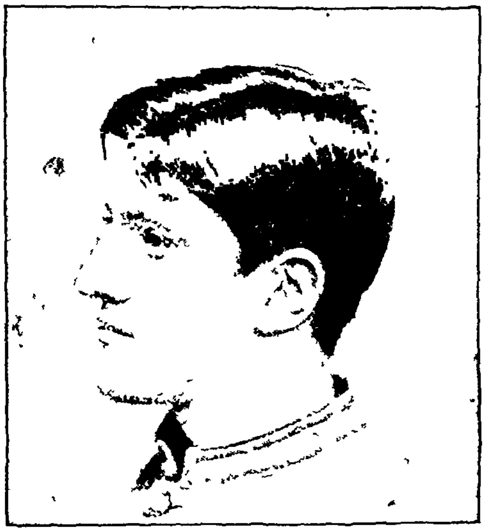

Fig. 7.—A young criminal with typical anteroposterior arrest of the face.

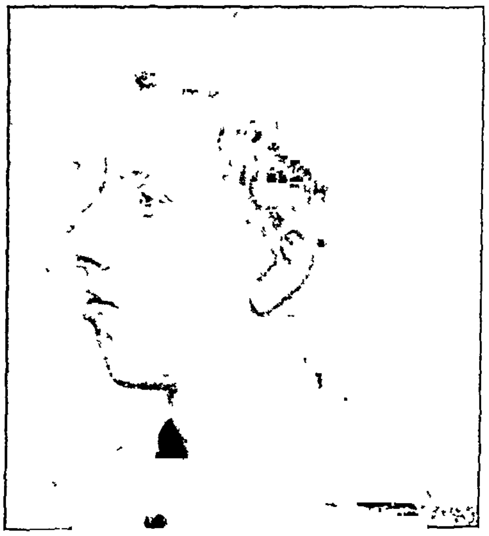

Fig. 8.—A criminal with lateral arrest of development of the face. The two forms are the types of arrested faces. In both are all deformities of the nose, face, jaws and teeth.

A common and interesting retrogressive development includes the entire head and face. The forehead recedes from the perpendicular line and the jaws sometimes protrude beyond the line. This is a return to the lower types of man, and the more marked forms of degeneracy are exhibited in the resultant individual. This may often be seen in the idiot, the insane, the criminal, the periodical drunkard, the deaf-mute, the congenital blind, the one-sided genius, the habitual liar, the "smart" business man, the extreme egotist, the tramp, the kleptomaniac, the harlot and the pauper, whose deficiencies are due to a want of frontal brain development and stability or power to control.

THE SECOND PERIOD OF STRESS

The second period of stress occurs after birth at the time of development of the first set of teeth. During this period the child is apt to contract all the children's diseases. The entire alimentary canal, as well as the whole system, undergoes a change. The body is endeavoring to adjust itself to the requirements of the assimilation of solid food. Should any of the eruptive fevers due to contagions or infections occur the effect on the growing structures of the child is most marked, causing an unstable nervous system and producing arrest and excess in development. The bones of the face, nose, jaws and teeth are usually the first affected.

These structures, early in evolution, are sacrificed to the gains of the central nervous system. On them, therefore, do struggles for existence between organs leave most decided marks. It is not uncommon for development of the nose to be arrested in utero or soon after birth and remain so throughout life (Fig. 6). Two facial types result from arrest of development. Figure 7 shows the arrest anteroposteriorly, Figure 8 laterally. All other types of arrested development are modifications of these two. They may be more intense or less marked. The development of the bones of the nose may become arrested at an earlier time. The lower jaw in Figure 7, while apparently excessive in development, is really normal. The seeming excess is due to the arrested development of the face. Were the face normal the lower jaw would not appear so prominent. Because of its mobility the lower jaw is more likely to be normal in neurotics and degenerates than the upper. The lower jaw, also because of its mobility, sometimes becomes excessively developed, as illustrated in the ninth head in Figure 3, and then is atavistic; the lower jaw in Figure

S is arrested in development. Arrested development of the face nearly always involves the upper jaw. Arrest and excess in development of the nasal bones necessarily result in arrest of both the anteroposterior and lateral development of the face. When arrested development of the face and jaws takes place the lateral measurement from the outside of the molar teeth is reduced from two inches, which is the average lateral diameter in normal individuals at the present day, down to an inch and one-quarter or an inch and three-quarters in width.

It is not my intention in this paper to enter into a study of the causes and formation of irregularities of the teeth except to say that these irregularities are seldom inherited. The nature and the character of deformities of the teeth depend entirely on the order of eruption. The eruption of the teeth may be compared to a game of checkers or chess: the first moves on the board decide the game. The method and date of eruption of a few teeth decide the shape of the dental deformity.

Whenever arrest of the development of the jaws takes place there is also nasal stenosis with atrophies or hypertrophies and deformities of the bones of the nose and mucous membrane. It will be seen that the two conditions go side by side. Neither is dependent on the other to any marked degree as was formerly supposed, both being the result of an unstable nervous system. The successful treatment of one must exert a healthful influence on the other.

The perpendicular line, then, is the dividing line between the normal and abnormal facial angle. Deformities of the face, nose, jaws and teeth rarely require treatment except under conditions where these structures develop inside of the perpendicular line drawn at right angles to a line from the root of the nose to the external auditory meatus.

103 State Street.

BONE PATHOLOGY AND TOOTH MOVEMENT *

EUGENE S. TALBOT, M.S., D.D.S., M.D., LL.D.

CHICAGO

Until 1899 there was little or no knowledge in regard to the physiologic and pathologic changes in the alveolar process during tooth regulation. The question had frequently been asked, What changes take place when pressure is brought to bear on the teeth.

At that time I commenced a series of experiments on dogs, the results of which were published in the fourth edition of my work on "Irregularities of the Teeth and Their Treatment." Impressions of the dogs' mouths were taken in modeling compound, and caps of German silver were made for the cuspids. A jack-screw was soldered to the caps. The dogs were securely fastened into a V-shaped box with cotton bandages, chloroformed and the appliances cemented into place. Muzzles were then placed on the dogs' heads and their forefeet tied to prevent removal of the appliance. The muzzles and bandages were removed twice a day for the purpose of feeding. The screws were given one-fourth, one-half and one full turn every evening. The screws were 60 threads to the inch. The teeth of three dogs were moved 1/240, 1/120 and 1/60 of an inch daily, respectively, as suggested by Farrar.[1] At the end of three days the muzzles and bandages were removed, the dogs having become accustomed to the appliances. This process, in which the screw was turned one-fourth and one-half turn each day, was continued for seven days; the one in which the screw was turned one full turn was continued for two weeks. The object was to set up pathologic changes in the alveolar process similar to those produced in the human mouth.

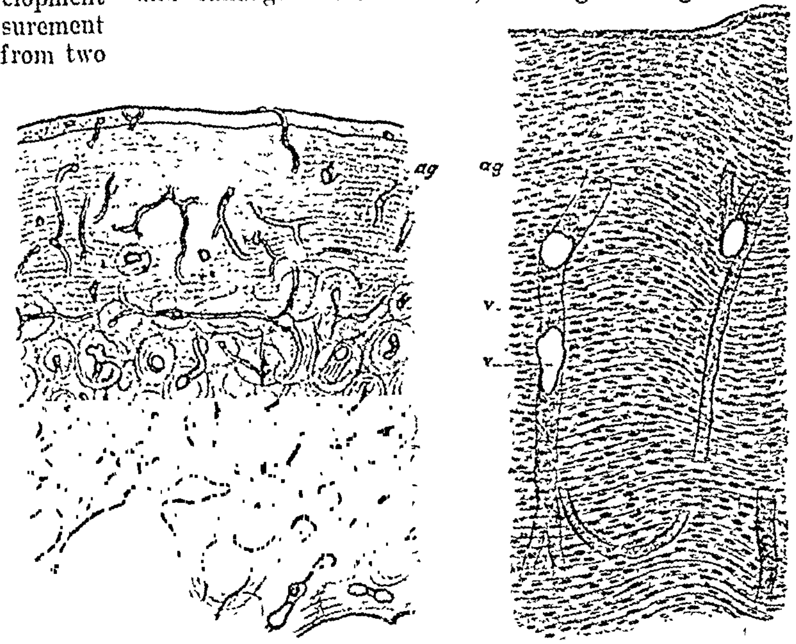

Fig. 1.—(a) Cross-section of medulla of calcified human humerus, showing Volkmann's canals; (b) transverse section under higher power.

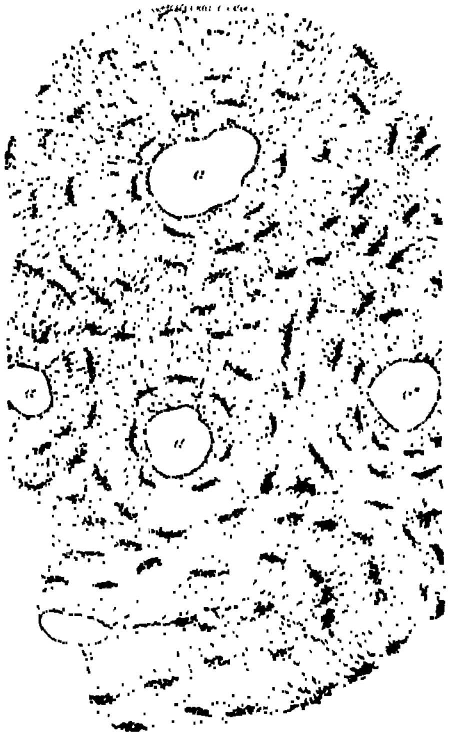

Fig. 2.—Showing Haversian canals a, a, a; dark spots surrounding Haversian canals lacunæ.

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* Read in the Section on Stomatology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

[1] Dental Cosmos, xviii, 23.

The dogs were killed at the end of the periods mentioned. The jaws were placed in 65 per cent. alcohol for twelve hours, in absolute alcohol for forty-eight hours, and then transferred to 5 per cent. nitric acid and water. The latter was changed every two days for a week, or until the tissues became soft enough to be easily penetrated by a pin. They were then placed in running water to remove acid, which took from twelve to twenty-four hours. The tissues were placed in 65 per cent. alcohol six hours; in 95 per cent. alcohol six hours and absolute alcohol twenty-four hours. They were imbedded in thin celloidin twenty-four hours; in thick celloidin twenty-four hours; then mounted on blocks of wood and hardened in 80 per cent. alcohol from six to twenty-four hours. The specimens were cut and stained in hematoxylin-eosin.

Before describing the results of these researches let me take up the minute anatomy of bone tissue. Under the microscope two systems of Haversian canals are seen in the alveolar process. Kolliker[2] describes these as follows:

> The Haversian canals are of two kinds, one with the regular lamellæ system surrounding it and the other, the so called Volkmann's canals, containing the perforating vessels of von Ebner, which have no surrounding lamellæ but simply penetrate the layers of bone. Volkmann's canals are present in all tubular bones in old and young. While especially present in the outer basal lamellæ, they occur also in the *interstitial* leaflets and in the inner chief lamellæ as well as in the periosteal layers of the skull bone. Here their number is very variable. They run partly transversely or obliquely and also partly longitudinally through the lamellæ. Many of these canals open into the outer or inner surfaces of the substantia (compact substance), and also here and there into the Haversian canals and usually form altogether a wide meshed irregular network. In their structure they are sometimes smooth and sometimes furnished with dilatations and angles projecting in and out in profile. The widest has a diameter of 100 microns or more, and the narrowest not more than 10 or 20 microns; and there are still narrower ones which are altogether obliterated, ap-

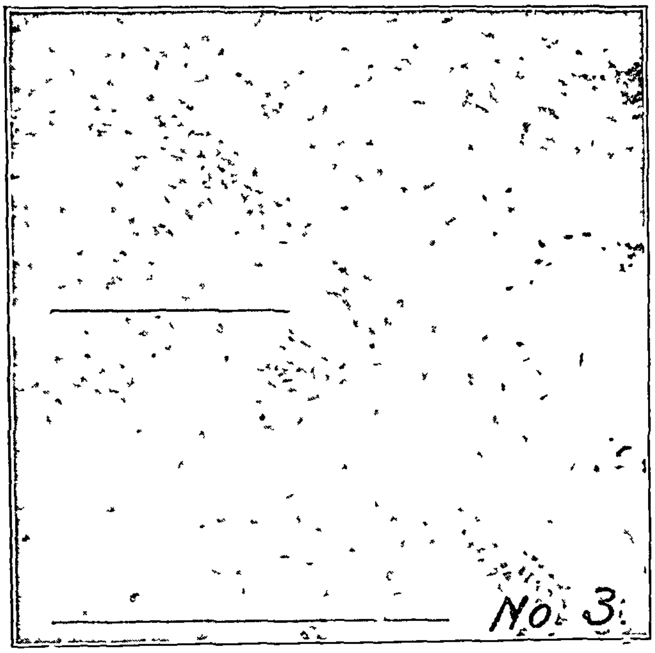

Fig 3.—Halisteresis, or absorption of alveolar process, taking place at four Haversian canals

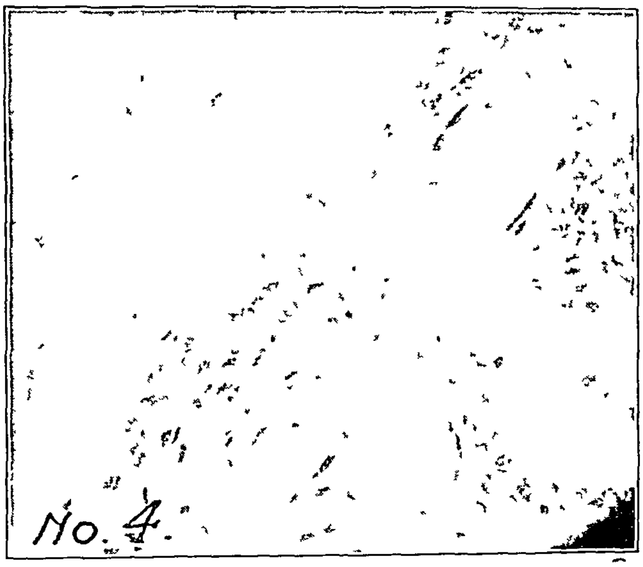

Fig 4—Two Haversian canals with bone destroyed between them

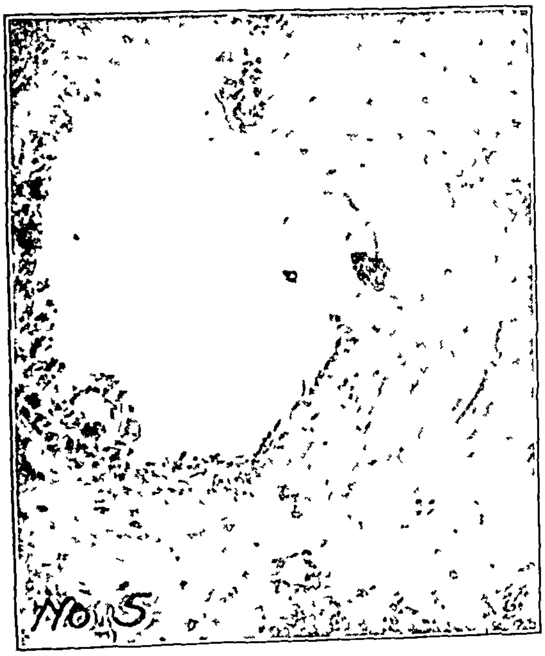

Fig 5—Large area of absorption, with destruction of fibrous tissue, and an artery, once a Haversian canal; outside of the absorption area, three Haversian canals with inflammatory process just beginning

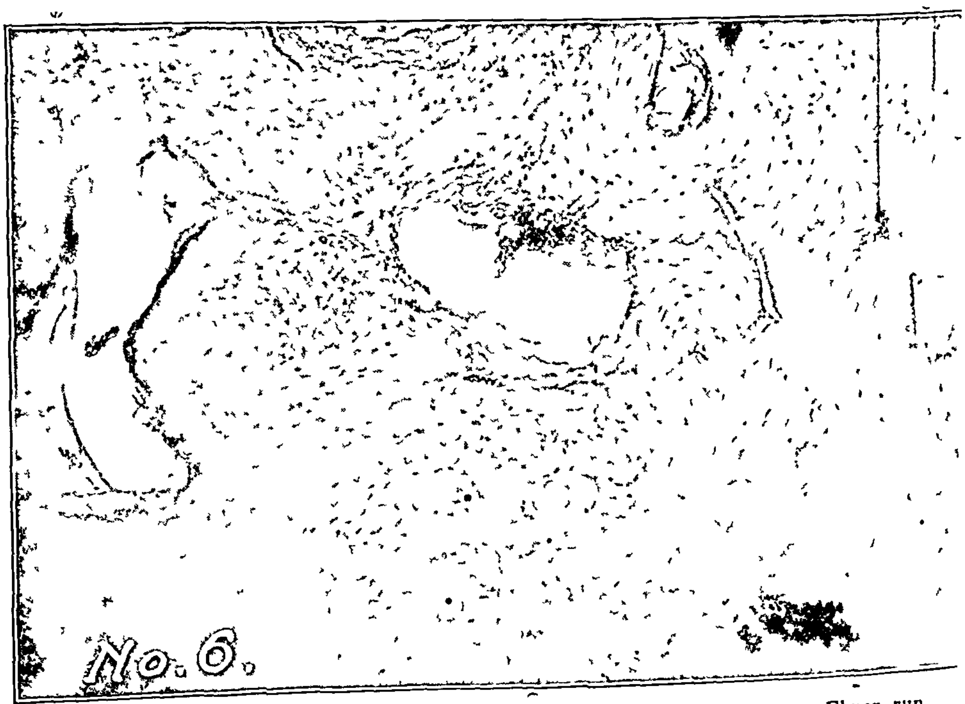

Fig 6—Four centers of absorption at Haversian canals, vessels of von Ebner running in all directions

pearing like rings or circular-formed structures without any lumen, or like those far from rare obliterated true Haversian canals first described by Tomes and de Morgan. The contents of the Volkmann canals are the same as those of the Haversian canals.

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[2] Handbuch der Gewebelehre, p 272

Figure 1 (a) is a cross-section of the medulla of a calcified human humerus slightly enlarged. The outer lamellæ contain a large number of Volkmann's canals running longitudinally and transversely and extending through the outer plate of bone into the periosteum. Figure 1 (b), transverse section of the specimen seen in Figure 1, shows these canals under higher magnification.

The Haversian canals are large round spaces (Fig. 2), containing a single artery and vein. The fine hair-like spaces running from these large spaces are the canaliculi. The dark spots around each Haversian canal are the lacunæ. The canaliculi run from one lacuna to another into a Haversian canal, or they anastomose with each other. *The rings of bone about each Haversian* canal are called lamellæ. The lacunæ seem to be about uniformly distributed throughout the bone. The spaces between the lacunæ and canaliculi are filled with lime salts.

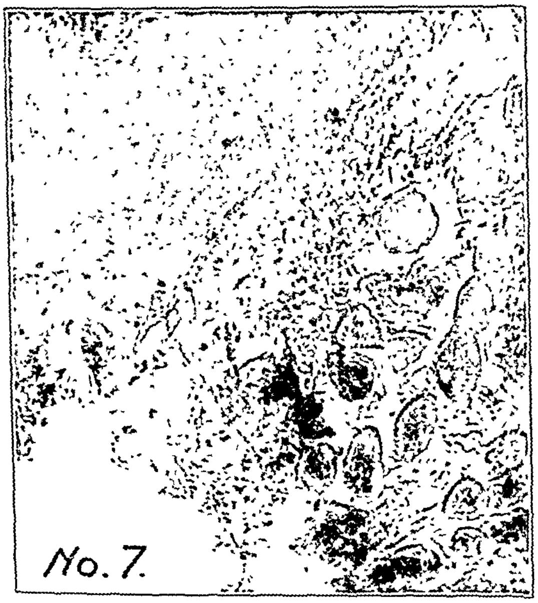

Fig. 7.—Lacunæ or osteoclast absorption.

When pressure is applied to a tooth, irritation and inflammation is set up in and around the arteries. The larger arteries running through the Haversian canals are first involved. An inflammatory process is set up around the margin of the Haversian canals and absorption takes place. Figure 3 shows the absorption of the alveolar process taking place at four different points or Haversian canals. The process of absorption is called halisteresis, meaning melting away of bone substance. The inflammation thus set up produces rapid absorption. Each of these four areas enlarge until they unite, producing larger ones. The lime salts are thus destroyed, leaving the fibrous tissue or trabeculæ intact. A considerable quantity of bone may be observed remaining in this illustration. Figure 4 shows two Haversian canals with the bone entirely destroyed between them, while *Figure 5 illustrates* a large area of absorption with destruction of the fibrous tissue. Around the border is seen a small amount of inflamed fibrous tissue; an artery, once a Haversian canal, is also seen. Outside of this large area are also seen three Haversian canals with the *inflammatory process just beginning.*

Figure 6 shows four centers of absorption at Haversian canals. The dark lines running in all directions through the picture are the vessels of von Ebner, through which Volkmann's canal absorption takes place. A beautiful illustration of this is the canal running from one large area of absorption to the other. Figure 7 shows the third form of bone absorption, lacunæ or osteoclast absorption. Here a large area of bone is destroyed by these large cells. Figure 8 is a low-power view, showing the destruction of the alveolar process due to pressure and absorption between the roots of the two teeth. Very little of the bone remains. When large areas of trabeculæ or fibrous tissue are destroyed, as shown *in the center of* this illustration, under certain conditions of interstitial gingivitis, especially after the alveolar process has obtained its growth, the bone cells are never reproduced.

Enlargement of the nasal cavity may *readily be accomplished by spreading the dental arch by opening the* suture at the median line provided ossification has not taken place. Arrest of development of the face, nose, jaws and teeth is due to an unstable nervous system or there may be excess in development, including ridges along the suture. In other words, the suture may ossify at two years; it may remain ununited as late as the thirty-sixth year, or, as sometimes occurs with the suture of the cranium, it may never close. To quote from my previously published work,[3] a passage which refers to the ridges on the suture in the mouth:

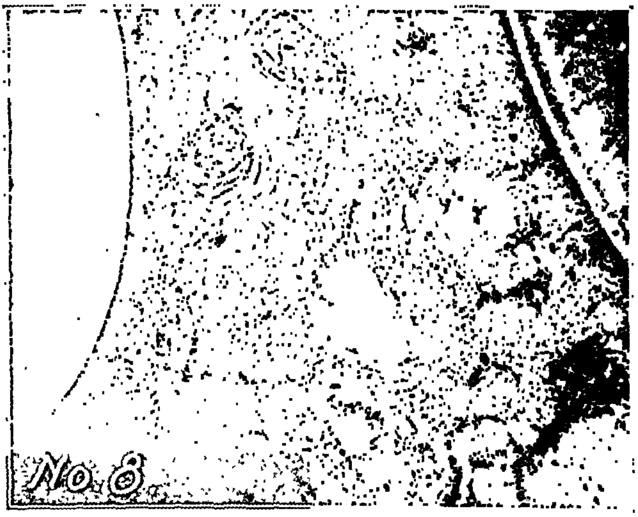

Fig. 8.—Destruction of alveolar process due to pressure and absorption between the roots of two teeth (low power).

> How, then, are deformities to be accounted for? We have seen that these projections are developed as early as the second year and as late as the thirty-sixth year. We are safe in the assurance that they are the result of excessive development of the suture, due to irritation set up at the time of ossification, by mastication, the lower jaw developing laterally faster than the upper, thus crowding the superior maxillary bones apart. I have observed this action in a large number of my patients, one of which I will here describe. A woman, thirty-six years old, had a space between the central incisors of 0.50 of an inch. No space was observed until twenty years of age. The teeth filled the arch and all articulated. The lower jaw continued to develop and the act of mastication carried the superior maxillary bone laterally, widening the suture, the space filling in and producing a ridge.

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3. Osseous Deformities of the Head, Face, Jaws and Teeth, 1894, p. 391.

What will occur when early ossification has taken place and the closed suture has been reinforced by hypertrophied bone along the ridge? Will the process of causing inflammation and bone absorption in the alveolar process by pressure in the regulation of teeth extend its influence to bone cells about the nasal cavity? This is a subject for much discussion.

103 State Street.

READJUSTMENT OF THE SUPERIOR MAXILLÆ IN TREATMENT OF HARE-LIP AND CLEFT PALATE

AND THEIR SEPARATION BY DIRECT PRESSURE FOR THE RELIEF OF DEFLECTED NASAL SEPTUM AND CONTRACTED NARES.[*]

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It would seem safe to assume that nearly all practitioners of medicine will agree on the following points: In cases of deflected nasal septum or contracted nares leading to partial or complete stenosis with the usual associated difficulties of spurs, enlarged turbinal bodies, hypertrophic enlargements of intranasal structures and other factors of similar nasal diseased conditions, with adenoids, enlarged tonsils and mouth-breathing it would be greatly beneficial if more breathing space could be secured and better oxygenation made possible by some means other than complete removal of turbinal bodies, a practice now largely abandoned, as many operative procedures not yet entirely discarded doubtless will be when both their inefficiency to give permanent relief and their postoperative disadvantages are better appreciated.

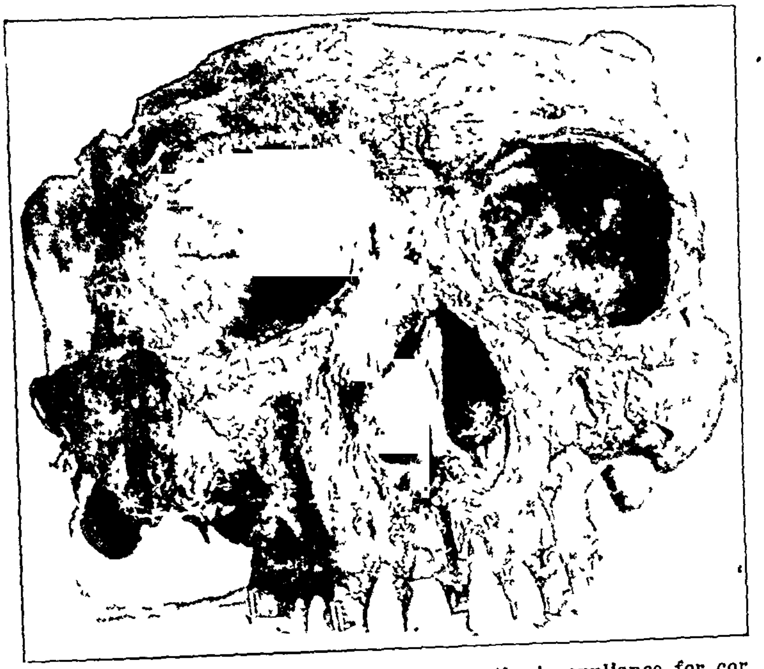

Fig. 1.—Skull, to which was applied author's appliance for correction of intranasal deformity, showing separation of suture.

Fig. 3.—Patient in whom the nasal septum was so buckled as to produce almost complete stenosis of the nares.

All, however, are not agreed that this can be done. Even those with whom I have been associated in the correction of such conditions, who know from practical results that these patients can be benefited by extranasal procedures such as I have applied, though agreed as to the effect, have not been entirely in accord as to the manner in which relief is given.

My purpose at this time is, therefore, to explain the method of applying direct pressure in such manner as to separate the upper maxillæ through the median suture. As a result of this operation by separation at the floor of the nose, wider space must be secured; through the forcing apart of the nasal processes of the superior maxillæ on both sides, more or less additional room must be given in the region of the nasal fossæ, and because of their attachment the nasal bones must have tendency to move with the maxillary bones to which they are attached, thus materially increasing the natural air passages throughout. I shall also demonstrate by presentation of cases, photographs and other clinical evidence that not only does actual separation occur, but that the therapeutic benefits are beyond question.

This method, which I had been following some years previously, was definitely reported in 1901 by Dr. Nelson M. Black of Milwaukee, on whose patients I had successfully performed expansion of the maxillæ in this way for the relief of aural and nasal affections. On other occasions I have claimed originality for the idea of expanding the dental arches in this way for the definite purpose of producing this result. So far as I have been able to learn, it was never before done for that purpose, notwithstanding the fact that nearly all dentists at various times in their orthodontic experiences have noted separation of the central incisors as herein described with more or less alarm but without definite understanding of the possible therapeutic value of properly producing that separation.

There has been among rhinologists generally more or less failure to understand just how this should be done; in many instances reference of cases to dentists for expansion of the dental arch by the methods of modern orthodontia has not given satisfactory results. Through the courtesy of Dr. Lee W. Dean of the University of Iowa I have been able to perform the same operation on the skulls of fresh cadavers, one of which is illustrated in Figures 1 and 2, showing conditions just as produced for patients with the median suture separated and the nares expanded as described. For these reasons it seemed well to place the whole matter definitely on record and to add thereto some additional clinical evidence of practical therapeutic benefits accomplished thereby.

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[*] Read in the Section on Stomatology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

CAUSES OF HARE-LIP, CLEFT PALATE, ETC.

It has become apparent to me through study of the grosser deformities of hare-lip and cleft palate and the effect on the development of the nasal septum and other intranasal structures of maldirected force expressed through abnormal muscular action and unnatural breathing, as well as arrested development and consequent malformations due to early compression of the maxillæ of such infants in efforts to close the palate, and other factors leading to increase or decrease of deformity which are, as might be expected, more apparent in these extremely marked types of asymmetrical development, that by rearrangement of the superior maxillæ much might be done that could not otherwise be so well accomplished.

Whatever the etiologic factors may be or however well explained by rhinologists, the fact remains that with deformities such as deflection of the nasal septum, spurs, and other conditions which bring about partial or complete nasal stenosis, the one great desideratum in attempting cure is larger breathing space, more room for the oxygenation on which healthfulness of the more or less hypertrophed tissues depends.

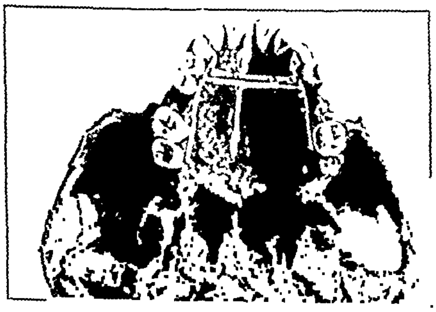

Fig. 2.—Same skull as in Fig. 1, showing appliance in position, palate suture apart.

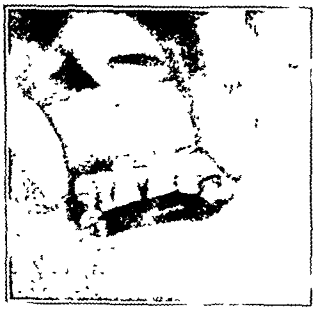

Fig. 4.—Showing space between central incisors which was produced in patient shown in Fig. 3, after wearing appliance two weeks.

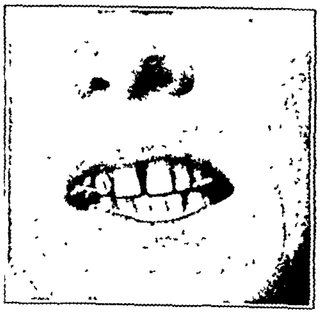

Fig. 5.—Separation of central incisors in another patient brought about by wearing appliance approximately two weeks.

Although my present intention is to explain readjustment of the superior maxillæ in relation to the surgical and therapeutic possibilities of such treatment. and questions regarding the etiology of nasal and pharyngeal deformities have, therefore, not been entered into, there is, nevertheless, one general feature with reference to the literature of these subjects taken in a general way that does seem to require notice as being in line with a complete [illegible] the requirements which demand the [illegible] here recommended.

Many authors in this country and in Europe have devoted much space to causal factors of deviated nasal septum, and deformities, such as adenoids, enlarged tonsils, crowded dental arches, dental irregularities, and other abnormal conditions in these regions, which are so frequently found in the same individuals.

The dental irregularities and high, narrow palatal vaults have been ascribed to the adenoid vegetations and nasal defects which caused mouth-breathing; again, the adenoids and enlarged tonsils have been laid at the door of the dental irregularity, or the adenoid vegetations have been ascribed entirely to want of nasal breathing and insufficient oxygenation. Some authors have associated these defects and given heredity full credit for all the ills that are thus associated, to the complete exclusion of factors such as imperfect physiologic respiratory effect, abnormal muscular action, and the other influences directing or misdirecting developmental processes. In short, many theories, all more or less correct, but each in itself insufficient to cover all these conditions, have been advanced, accounting for other abnormalities under discussion by causes ranging from thumb-sucking and accidental injury to the more complicated embryologic and physiologic factors.

A careful scrutiny of nearly all such patients will usually reveal other features and sometimes remote parts of the body unequally or at least asymmetrically developed. These, therefore, could not result from any of the etiologic factors that apply only to local conditions, and some general law governing a tendency to irregular cell development must be accountable as a first factor in nearly every instance.

Adenoid vegetations are usually, and would appear to be almost necessarily, associated with mouth-breathing and imperfectly developed nares. Yet the fact which I have previously noted in former papers, namely, that in individuals with cleft palate, even those with wide fissures throughout, one quite commonly finds masses of adenoids and tonsils much enlarged, demonstrates that in such cases at least restriction of the nasal space did not cause the vegetations.

On the other hand, the effect of muscular action in mouth-breathing, thumb-sucking and other habits of this character can not be denied or ignored, any more than one could say that hard labor would not show its effect on the shape of the hands, or that an organ or part of the body would not atrophy from disuse and become larger and stronger by exercise.

METHODS OF CORRECTING INTRANASAL DEFORMITIES

The various operations for the correction of the intranasal deformities, such as the Asche operation, the so-called window operation as practiced by Freer and others, removal of spurs, etc., while frequently successful in skilful hands in giving some measure of relief, are, nevertheless, somewhat limited in their usefulness. There seems to be no room to deny the statement that if the external walls of the nares can be moved apart to the end that the breathing space may be thus enlarged and this by sufficiently harmless methods, the result would be one greatly to be desired and highly beneficial. This I have been doing for a number of years.

Through application of a force at once simple, direct and effective, we are able to get a prompt and positive result. The appliance used as shown in the illustrations consists of bands attached to the cuspids and molar teeth on each side so joined that when a bar with screw and nut is attached across the palate in the bicuspid region, the force applied by turning the nut will cause pressure against all of the teeth on each side of the dental arch. With pressure applied so gently that there is no pain and but little inconvenience experienced by the patient, it is possible in all young persons (and the illustrations here given show that it is also practicable in older ones) to force the maxillæ apart by separation of the median suture extending between the central incisor teeth and on through the central portion of the hard palate.

Evidence of this is given by the fact that the central incisors are moved apart without attachment or direct pressure of any kind being applied to these teeth.

So easily is this accomplished that members of the patient's family usually turn the nut at home, and it frequently happens that from the time of the insertion of the appliance until the separation is complete I never see patients who live at a long distance from me.

With the separation of the superior maxillæ in this manner, as might naturally be expected, the nasal processes and the nasal bones through their points of attachment are moved with them, thus giving a direct and immediate increase of space within the nares.

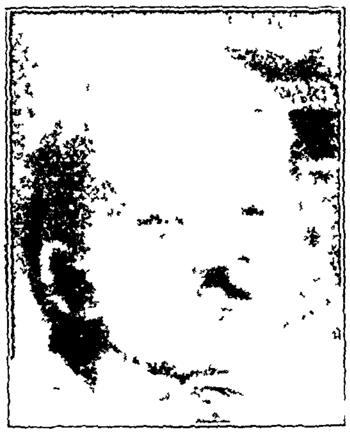

Fig. 6.—Faulty result from attempting to close the palate and the lip at the same sitting in a case of harelip and cleft palate.

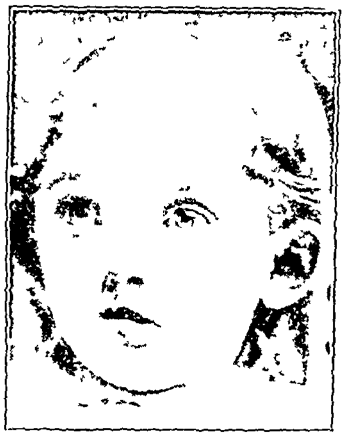

Fig. 7.—Same patient as in Fig. 6, after closing lip fissure.

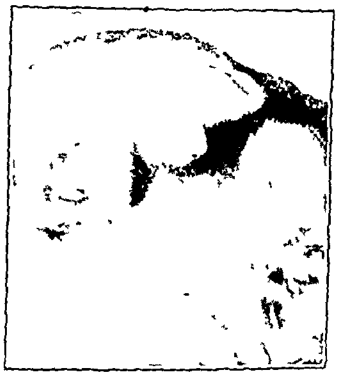

Fig. 8.—Cast of mouth of a girl of 14 in whom early operation for cleft palate caused the result shown

With many dentists, particularly orthodontists, it is a common practice to enlarge the upper dental arch in the correction of dental irregularities and much benefit to the nose as well as mouth is usually accomplished, but with all appliances commonly used by dentists the pressure is chiefly applied in such manner as to cause an osteoclastic absorption of surrounding bone. This has been clearly demonstrated by Talbot in his experiments on dogs, on the teeth of which he placed regulating appliances, and later examined microscopically sections of their jaws and teeth after pressure had been applied for a sufficient time. To get the best results, however, this osteoclastic absorption is exactly what should not take place. By immediate and direct pressure as given by the appliance that I have devised, through marked resistance of the more rigid portions of the superior maxillary bones in the region of the malar processes, just the right counter-force is applied to make the effect extend into the higher regions between the maxillæ

RESULTS

Direct proof of this is given in many ways. For example, in the skull shown in Figures 1 and 2 the diameter across the base of the nose, between points marked and measured before applying pressure, increased one-eighth of an inch, and across the upper third of the nose one-sixteenth of an inch.

Figure 3 shows a young man, aged 29, whose nose was injured by a baseball in early youth. A rhinologist, Dr. Nelson M. Black, by whom the patient was referred to me, found the septum buckled in such a manner as to give almost complete stenosis of one naris, the turbinal bodies much enlarged, and hypertrophic conditions generally marked. The patient was greatly troubled by attacks of sneezing when he bent his head downward.

The appliance was adjusted April 6, 1908; within two weeks the space between the central incisors appeared as shown in Figure 4. Actual enlargement of the nares was confirmed on examination by Dr. Black, and by the improved breathing experienced on the part of the patient himself, thus proving that even at this patient's age the desired result had been quickly accomplished.

Most of the time the patient, who resides in another city, was at a distance from me, and the turning of the appliance was done by one of the members of his family.

Figure 5 shows a young man of 21 whose central incisors show the same separation, and for whom the maxillæ were parted, with marked improvement in the nasal width in approximately two weeks' time. The other illustrations are of patients referred to me by rhinologists, in all of whom the desired nasal space was secured promptly. To these might be added a long list of other patients who have received the same treatment with precisely the same result in my practice during the past few years if repetition by citation of other cases were either necessary or advisable.

All these cases show a greater or less amount of deviation of the nose from the central facial line, an imaginary, though clinically a very useful line, to which I have previously called attention, taken through center of forehead, tip of nose and center of chin. Deviation from this line, one way or another, is almost certain indication of perverted nasal and maxillary growth, leading almost invariably to pathologic nasal conditions.

Especially among growing children treated by this method has there been marked physical improvement, tendency to growth in height as well as general development, and increase in weight. Many of these had previously been unable to attend school regularly because of the tendency to affections of the nose, throat and bronchial tubes.

Nervousness was almost invariably very greatly relieved, and this, it is believed, for two reasons: 1, the well understood results from the improvement in breathing apparatus with the general healthfulness to be expected from better aeration and freedom from diseased nasal secretions, and, 2, the relief of that condition to which Kiernan has called attention, caused by crowding together of the dental arches with tendency to nerve irritation.

This condition quite frequently manifests itself, not only in increased nervousness of a general character, but also in the development of neurotic tendencies leading to chorea, epilepsy and other similar affections, which in some instances at least might perhaps have been averted if these patients could have been tided over critical periods in their development. This has been recognized by Dr. Talbot as one of the periods of stress.

Certainly it is a curious fact that even with the disadvantage of having the appliance in their mouths and the bar across the palate, children who are subject to such pathologic conditions almost immediately become less nervous, have increased appetites, and general development goes forward almost from the very first few days after pressure has begun to be exerted.

I can not help feeling that this treatment can be made a very great factor in safeguarding against tuberculosis. It is so easily accomplished and the results are so greatly beneficial that it should be applied to the hundreds and thousands of growing children who are unquestionably more susceptible to pneumonic and bronchial affections because of imperfect breathing. It offers a possibility of relief which is especially important on account of the fact that such defects are well known to be on the increase, arrested development in the maxillary region being more marked in each generation under the conditions of our so-called civilization. The principles on which this treatment rests are based on and verified by a study of the development in embryo of those structures which ultimately develop into the bones of the nose and face and the dental organs. Sections taken through the heads of human embryos at important periods, from the fifth week until birth, and a further study of development in this region until the fourth or fifth year discloses the fact that in an early embryonic period the germs of both permanent and temporary sets of teeth are in course of development. It is beyond question that any restriction in the region of the palate and alveolar structures must cause crowding in the direction of least resistance, which is necessarily at the expense of the nares. Therefore, proper treatment must be relief by expansion in this region.

When through arrested development the palate and maxillary bones fail to unite, resulting in the development of hare-lip and cleft palate, adverse, uncontrolled muscular action causes disarrangement and spreading apart, which must receive attention in order to give symmetrical form to the nose, mouth and palate, as well as functional results in breathing and speaking, the application of force in the opposite direction to that required for the foregoing class is needed, for compression is necessary. The methods I employ for this purpose have been described in my former articles.[1]

As might also be expected when the method is followed of treating infants with hare-lip and cleft palate in early infancy by forcing the sides of the fissure together and the use of wires placed through the jaws with lead plates to hold them in position, the result must inevitably be deformity through narrowing of the nares, fixation of the maxillary bones in malposition, destruction of erupting teeth and, through their failure to erupt, arrested or imperfect development of the mouth, nose and lower part of the face.

An example of the ill results which sometimes follow this treatment is shown herewith in Figure 6. The patient was a little girl of 3 years old, on whom operation had been performed in early infancy according to the method above referred to, the maxillæ being forced together in an attempt to close the palate and the lip closed at the same sitting. The result was that the palate operation failed, except that a small portion of the tissues united sufficiently to hold the parts in their abnormal relation, as evidenced by the picture, and sloughing of the lip resulted in the loss of lip structure from the cartilaginous wing of the nose to the angle of the mouth on the affected side. Figure 7 shows the same little girl after I had closed the lip fissure. This picture makes apparent the fact that, though the lip itself looks fairly well, the deformed condition of one side of the nose can never be wholly overcome.

I have previously illustrated similar cases in the articles above referred to and in other publications. During the past year I have had a number of patients brought to me for correction of similar results of the same kind of maltreatment in early infancy. The unfortunate part of it is that patients of this kind in whom results seem to be quite satisfactory at the time of the operation in infancy, as development proceeds, will look even worse than those illustrated, because, as the children become older their correction is much more difficult. Figure 8 shows a cast of the mouth of a girl of 14 in whom early infancy operations for cleft palate have caused the result shown.

SUMMARY

In otherwise normal cases the maxillæ should be separated to improve contracted nasal conditions, and the earlier this may be done the better the result.

In infants with hare-lip and cleft palate, the parts should be readjusted by gradual methods, care being used not to disarrange more than may be absolutely necessary those structures, which, though invisible, are nevertheless in course of development.

In cases in which very wide fissure actually exists the width of the fissure should be reduced and the form of the palate corrected before plastic operation for closure is attempted.

It appears to be quite impossible for one to overestimate the benefit to the general health and development of growing children, could they be thus cared for at a sufficiently early date. In the war against tuberculosis, treatment of this character is unquestionably destined to be a factor quite worth consideration.

445 Milwaukee Street.

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[1] A System for the Surgical Correction of Harelip and Cleft Palate, THE JOURNAL A. M. A., March 18, 1905, xliv, 848; Conservatism in the Treatment of Infants with Harelip and Cleft Palate, THE JOURNAL A. M. A., March 2, 1907, xlviii, 754.

ABSTRACT OF DISCUSSION*

ON PAPERS OF DRS. DEAN, TALBOT, BLACK AND BROWN

Dr. Nelson M. Black, Milwaukee: My paper referred especially to the widening of the upper maxilla in cases of deflected septum, after which widening there is decided straightening of the septum. After the jaw is widened, either from resiliency of the septum or from the relief of tension consequent to lowering of the vault the septum is forced in between the suture or space, and to a large extent helps to hold the two arches of the palate apart. In cases in which this operation is done for deflected septums, a retaining appliance does not appear to be as necessary, or, if worn at all, is worn for a much shorter period, with the continued good benefit that is brought about by the widening of the maxilla. So the septum either must spring down between the two halves of the palate and hold these apart, or else besides a lowering of the vault and the resiliency of the septum which tends to hold the tissue separated, there is a new disposition of bony tissue which keeps the widened maxilla in its position; for with the result once accomplished I have never seen the deformity recur.

Dr. James E. Power: In the cases in which the separation is as marked as in the skull just exhibited, what ultimately becomes of that space brought about by the separation? Does tissue form in there, and if so, what kind of tissue? Does it finally become cartilaginous or bony? Dr. Black partially explains this by the dropping of the arch after the palate bones have been separated; but if this theory is not accepted, what ultimately fills that space? In a case of separation when the teeth are all present, I can accept the opinion that the teeth may find their normal position, or a new position; but in the cases in which teeth have been extracted and the full number of teeth not present, then it seems to me without knowing all about this particular operation, that the teeth would have a tendency to move backward.

Dr. Vida A. Latham, Chicago: I am glad that our section has tried to force the general medical profession to recognize the desirability of joint work on the part of rhinologists and stomatologists. Dentists should be associated with rhinologists in widening the arches in cases that require it.

I do not think it wise to operate on adenoid tissue with a cautery, for every one knows that to treat a burn is far worse than ordinary incision; because of the sloughing, the danger of infection and of hyperplasia or hypertrophy which only gives a return of the conditions that we are trying to get rid of—an excess of adenoid tissue. At what age do adenoids (hyperplasia and hypertrophy) begin to show themselves? Some state that the very earliest is four or five years. I think that there is a likelihood of those conditions appearing much earlier. I have seen cases in which the palate was well developed, with good respiration, and the adenoids have recurred after being removed by specialists. So it seems that there is an unknown factor at work. What produces adenoids and why do they recur?

Does the condition of deflected septum always come from deformity of the jaws? There are cases of deformity in which deflected septum is not present. There is sometimes an inclination to stenosis of one side of the nose of the fetus three months *in utero*. So although the statement is made that adenoids occur only at two to four years, it seems rather late for us to begin to correct the condition. I take issue on the question of obstetric forces. Unless we can consider the matter of a normal position in obstetric work, I can not see how accouchement forcé can possibly produce those defects. Why? Because the time of delivery is short in comparison with the length of time the fetus has been developing. In the Bohemian and Lithuanian districts, there is notoriously difficult obstetric work. One would think the general difficulty of delivery would produce the most awful deformities, but they do not often result. Sometimes it seems impossible that the brain will ever recover, but generally it does.

Are calcified jaws really ossified so as to be firm at birth? I should say no, because there is not a case in which the jaw will not slip forward and back again and retain its shape. I think that, as Dr. Talbot says, there is some indication that the position of the fetus might have something to do with it. Given the deformed pelvis in these rachitic or osteomalacia cases, in which the child's head is bent on the chest or under the arm, then, and only then, by pressure previous to birth could those difficulties occur.

In treatment I do not think it is sufficient to apply a band or brace, without looking to the occlusion. I have models taken from a patient treated through the suggestion of Dr. Brown, who recovered with his theory of less orthodontia. This patient was abnormally developed; his teeth were locked, the anterior teeth protruded very much. That man, on having the separating bar and screw in, jumped his bite and the jaws went back, securing almost normal occlusion and he is much better. The uvula was about three inches long and reached into the throat, making him cough most of the time. In this case it would not have sufficed merely to bring down the palate, unless some method of exercise had been put into execution. It is a good plan in these cases to put a patient, with the mouth shut, under military treatment and the exercise of slowly climbing hills. At first he can go only a few steps up-hill without trouble in breathing, but after he has done it twice a day for a time, going slowly up, breathing with the mouth shut, you would be surprised how the bringing in of oxygen helps such a case of deflected septum. I believe that methods of exercise should be considered with the method of regulations. When do these deflected septums occur, and how can the submucous resection of the jaws help those cases by the filling in of bone?

Dr. Eugene S. Talbot, Chicago: A point of great interest to the rhinologist and to the dentist is the widening of the nasal cavity. There is a law governing development, and if that law be understood, it is easily seen how the suture develops. We have been speaking of arrests of development, but we must also bear in mind the fact that there is frequently excessive development. Patients are often seen who have spaces between the permanent central incisors. Dentists believe these spaces due to the frenum of the lip, no doubt, because it is located at that point. But the frenum has nothing to do with it; it is simply lateral overdevelopment of the upper jaw; the jaw continues growing. Often when there is arrest of development of the upper jaw, the lower jaw develops normally, because the former is movable, and more blood is carried to it on account of its mobility, while the upper jaw is fixed. When there is an unstable nervous system the lower jaw will carry the upper jaw outward laterally by force of the articulation, and this suture develops abnormally wide and connects the two bones together in a firm mass. The same law holds true with hypertrophy of the fissure. I have demonstrated by illustrations this excessive development taking place at the second year; that is, there is hypertrophy of the suture. Hypertrophy of the suture in the vault of the mouth is just as liable to occur as arrest of development, although it is not seen so often; more frequently there is an arrest of development of this suture, and that is favorable to the work Dr. Brown has brought before us.

When appliances are used to separate the maxillary bones it is simply a matter of how much pressure can be brought to bear on the teeth. If sufficient pressure be exerted to open that suture, when it is undeveloped, when the arches have not united, or when there is hypertrophy, then we shall accomplish what we wish. If, however, we have hypertrophy of the suture, and are unable to move the lateral halves of the bone apart, it is difficult for me to understand how the nasal cavity is to be enlarged. I can conceive of such cases.

I have been asked what the material is that fills in that space. It is nothing more or less than an osseous formation. How quickly that will be formed depends on the nervous system. I can see very readily that the suture might close with new bone and hold the lateral halves in place in connection with the inferior maxilla within a few months. On the other hand, I can conceive of opening up that suture and never having it unite. I have seen such cases. Of course, they are rare. I have published a report of a case of suture in the temporal bone remaining ununited. It is not uncommon to find in degenerates an arrest of development of the suture of the frontal bone. There is a case recorded ("Osseous Deformities of the Head, Face, Jaws and Teeth") of lack of union of the superior maxillary bones at the thirty-sixth year.

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* Because of lack of space, part of this discussion, including the illustrations, is omitted. The full discussion with illustrations and with the complete text of the five articles by Drs. Dean, Talbot, Black and Brown appear in a reprint, a copy of which will be sent by the American Medical Association on receipt of four cents in stamps.

* The papers of Drs. Dean and Black appeared in The Journal last week.

Dr. E. A. Bogue, New York: Dr. Léopold Chasreau asserts that he has operated at birth for adenoids in fifty cases. I took occasion to inquire very carefully at four children's hospitals in New York about the age at which adenoids appear. The physicians at the Sloane Maternity Hospital said that they had not in five years had a single case of adenoids in children under 3 years of age. Perhaps they had not observed them. The mother of one of my own little patients says that her daughter had them at nine months. It seems to me that the tonsillar ring may be mistaken for adenoids. There are present in that only the elements of what may later become adenoids. Adenoids are pathologic and tonsils are not.

Dr. Stewart L. McCurdy, Pittsburg, Pa.: In the study of the development of tissue and the deformities of the extremities, we as orthopedic surgeons have changed entirely around from the original theory that pressure produces atrophy. This has come about since the deduction from the work of Wolff in Europe, known and accepted now as Wolff's law, that under pressure tissue develops rather than atrophies. This law applies to bow-leg and knock-knee. Bow-leg in children depends entirely on the weight that the legs carry originally. I have seen as many as five cases in one family and I have operated in one day in my clinic in Pittsburg seven cases of bow-leg or knock-knee in Italian and negro children. Yet how many cases do you see of bow-legs in adults? We do not operate in all these cases. Comparatively rarely do such patients come to us for operation; yet Nature herself rectifies those deformities because of the demand that is made on the tissue. As the bone develops, the tibia and fibula or the femur, the tendency is for it to develop in straight lines. These deformed bones are, therefore, rectified without any treatment at all, because as the epiphyses unite with the shafts of the bones the limbs become straightened. So we should, I believe, take this factor into consideration in studying the deformities of the face.

I am impressed with the advantage of the operation of Dr. Brown, because when he separates the maxilla there is a space left between these bones that is in proportion to the extent of space that is left between the teeth. If the piers of a bridge are moved apart and just the same amount of material used to reach across from one pier to another, the result must necessarily be an arch with less circumference. So if there is a very high arch before the separation is made, after separation the arch is lessened in circumference; it is brought down, and thus the material reaches across. The spreading of the maxilla causes the arch to drop down, and as it does so the septum will spread out to reach the same position. The tendency is, then, to develop in straight lines and to fill these spaces that are left.

Permanent deformity resulting from parturition is rare. I saw a case of permanent dislocation of one-half of the frontal bone, about four months after birth, and nothing could be done at that late time. In the practice of obstetrics we see great distortion of the skull immediately after birth, but my advice is not to try to reshape these heads; allow Nature to do this, which she always does, and there will probably not be any permanent deformity. I have operated on a number of cleft palates. In these cases there is a lack of material. The material was sufficient originally, but was not adjusted properly, and that results in a defect or cleft. We sometimes have this condition in the anterior surface of the bladder, and the same condition exists in spina bifida. In the latter case we can not, of course, bring the laminæ of the vertebræ together, because apparently the material present is not sufficient, but the soft tissues can be united with strong sutures, thereby making complete closure.

Dr. G. V. I. Brown, Milwaukee, Wis.: The common idea as expressed by one school of orthodontia is that malocclusion is the chief factor. I believe fully in that when malocclusion exists, but in order to have malocclusion there must be teeth to be occluded; in other words, the teeth must have erupted to the point at which there can be occlusion. Unless something disarranged those teeth from their natural position, they would meet in normal occlusion. Therefore, malocclusion is only a secondary factor. Perhaps the primary factor is early loss of teeth, but more often it is something which disarranged the developing teeth so that they developed in wrong positions. From that time on, when the occluding surfaces of the crowns can meet, then, of course, we can not avoid the fact that occlusion must be considered in everything done.

I believe that perhaps 75 per cent. of the orthodontia that is practiced would not be necessary if we would give plenty of room to the teeth. The natural thing for teeth to do when not locked is to come in in proper form if they have room to do it; if they have not room, they can not. The cases in which these separations occur do not keep the separation at all—the incisors move over together; many times when the incisors are in marked protrusion they will drop back quite naturally into almost the perfect form of the arch without being drawn back. I believe that retrusion on those projecting teeth ought to be applied very carefully, and certainly not until they have done all that they will do for themselves and which they have a natural tendency to do in every case. The appliance put in prevents the bones also from returning to their first position afterward. This appliance may be left on as long as may be necessary. Most people do not like to have it in so long, and in those cases we remove it and the very same day put back a very much simpler appliance, a hard rubber plate that goes over the palate, carefully cut to fit the lingual surfaces of the teeth. With that, people can be sent away to any part of the country; you do not have to bother with them any more because you know that the jaws will be held in the same position as when the first appliance was taken off. The patient is instructed to continue wearing it until it can be taken out over night without noticeable effect, and then left out for longer periods without the plate feeling tighter when reinserted. For young people, who would be likely to take the plate out and keep it out, I prefer to have a fixed appliance that will remain permanently, but I find that the more I leave these teeth free to find their own proper places, except in a direction I do not want them to go, the better result I get and the more quickly they find the position in which they will be comfortably retained. That is why I like the simple plate which only touches the lingual surfaces and leaves them free. When there is expansion sufficient to give the proper breathing space and to make the upper arch as it should be, then if the lower arch is not in right proportion it must also be expanded, and in most of these cases we have had the lower arch expanded in order to keep the upper one in place.

Clinical Notes

A NEW SAMPLE SPUTUM BOX

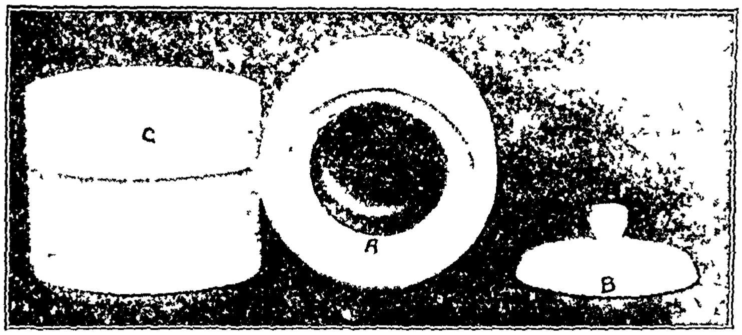
CHASE P. AMBLER, M.D.
ASHEVILLE, N. C.

To those who make microscopic examinations of sputum, either in private practice or in general laboratory work, it has all along been a question to secure a satisfactory receptacle in which the sample of sputum could be collected. Bottles, as a rule, are unsatisfactory from the difficulty of getting at their contents. The ordinary screw-top box comes back to the microscopist in such a condition that it is frequently unsafe, and certainly unsanitary, even to attempt to handle it. Moreover, the ordinary screw-top box swells on account of the moisture of the sample getting into the thread of the box, with the result that the box can frequently be opened only by breaking or splitting the lid.

To obviate these disagreeable features in the ordinary receptacle for securing such samples, I had made, over a year ago, a wooden box which consists of three pieces, as shown in the accompanying photograph. The base has an offset or shoulder at A on which the inside cap B rests, the interior of the base and the bottom of the cap being covered with asphalt, thus rendering the box impervious to moisture and also making a tight joint at the shoulder A. The knob on the top of the cap B projects slightly above the level of the base, thus allowing the cap C (when the top is screwed down on the box) to press on the knob of the inside cap, making a pressure at the shoulder A to insure a perfect joint at this point.

I have had these boxes in daily use for about a year and have found no objection to them since the shape of the cap has been changed and the knob supplied. The box can always be easily unfastened and the inside cap lifted out without soiling the hands.

The cost of these boxes is trifling, as they can be secured in ten-gross lots at $3.25 per gross. The boxes have been made for me (in wood) by E. B. Estes & Sons, New York City.



A new box for samples of sputum

I am not interested in the manufacture of the boxes but can recommend them to any one who has met with the annoying and disagreeable features above mentioned in the examination of sputum.

REMOVAL OF A FACIAL NEVUS

T. W. CURRY, A.B., M.D.
STREATOR, ILL.

History.—The patient, K. H., female, domestic, aged 15, had a hairy mole from birth, covering the entire right side of the face and raised above the surrounding skin, growing up into the hair, down along, close to and under the right eye, to within one-half inch of the ala of the nose and corner of the mouth down onto the neck, below the angle of the jaw and over onto the tragus of the right ear. The growth had given rise to no symptoms of any kind, but kept the patient a recluse, in order to avoid comment.

Operation.—This nevus was removed piecemeal, six different operations being performed, at intervals of two weeks. The first consisted in taking away a piece, three inches in width, on the neck over the angle of the jaw, undermining the free flap of skin on the neck, pulling it up and suturing it to the cut edge of the nevus. In the next stage, that part on the forehead was removed and a flap of skin, with the base attached, swung across from the middle of the forehead to cover in the defect. The remainder of the nevus was cut away in four sections, and ordinary Thiersch grafts, taken from the thighs of the patient at the time of operation, were used, the cut surface being thoroughly dried and the grafts placed directly thereon. After none of the operations did the grafts fail to grow, although the little patient could not be kept from talking. There was no suppuration at any time. That part of the nevus below and at the side of the eye was removed with the electric needle, since contraction of the scar and pulling of eyelids was feared if this portion were excised. The original intention of removing the mole *en masse* was later abandoned, for fear the cut edges of skin, retracting, would leave a space too large to cover. The grafts were dressed with gauze, held in place by small strips of adhesive plaster, with gutta percha tissue outside of this. In forty-eight hours, when the dressing was taken down, the gauze was found moist and easily detached from grafts. (Dr. L. L. McArthur, Chicago, gave me this useful suggestion when I was serving under him as an interne in St. Luke's Hospital.) It provides a sterile dressing next the wound, instead of the gutta percha which is difficult to render aseptic. As for the method of erecting a bridge over grafts, it would seem safer to place a dressing directly on so mobile a surface as the face and in this way prevent the grafts from slipping and becoming detached.

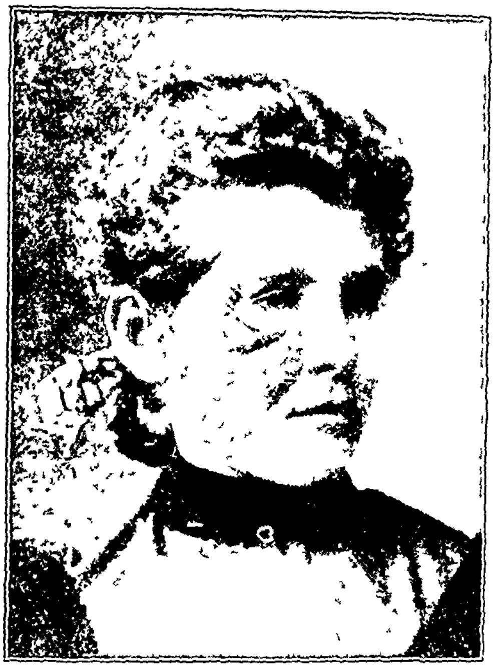


Fig 1—Patient with facial nevus

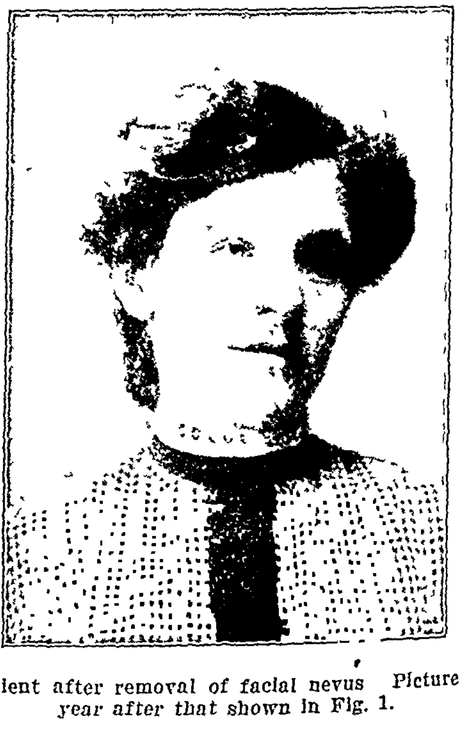


Fig 2—Patient after removal of facial nevus Picture taken on year after that shown in Fig. 1.

Postoperative History.—The patient suffered no ill effects from the repeated short periods of ether anesthesia She was kept on a liquid diet for four days after operation For se eral weeks after the work was completed the side of face on which the operation was done presented a bluish tint, but this soon faded out and now is the same color as the opposite side. At present, two years after the operation, there is only a little scarring, no contractures, no disturbance from heat or cold, and the natural expression of the face, when smiling and when in repose, has been preserved.

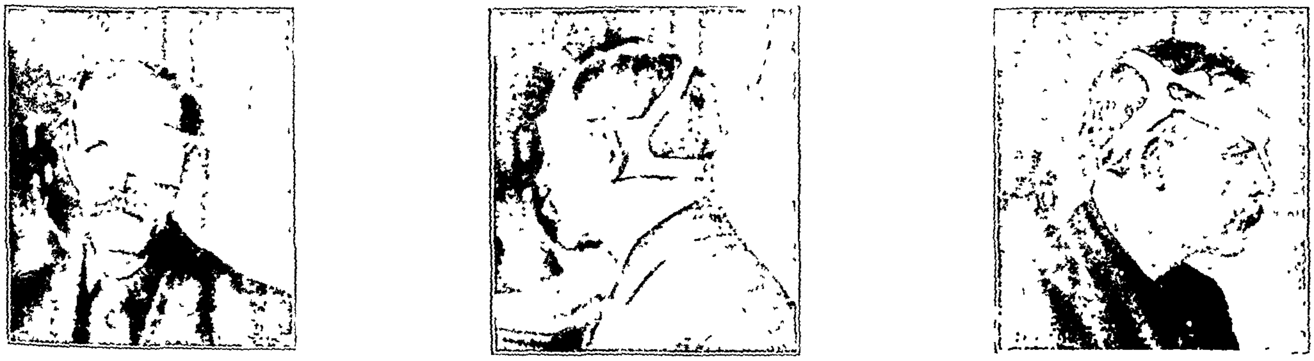
301 Main Street.

AN EYE BANDAGE AND ITS METHOD OF APPLICATION

G. A. MORLEY, M.D.
CROOKSTON, MINN.

I present herewith illustrations of an eye bandage and its method of application which I have found of great service in my practice. The bandage will remain in position on children and patients who are confined to bed: it is easily removed and reapplied; it is washable, and can be used several times; it is easily made and requires a small amount of material; it is light and cool.

To make the bandage, take a piece of muslin or gauze the desired width, long enough to go around the patient's head, and fold it in such a manner as to cut a hole for the ear equidistant from the ends, as shown in Figure 1. The bandage is then put on the patient with the ear through the opening just made, the distance from ear to nose is measured, and a curved piece is cut out in order not to obstruct the vision of the good eye (Fig. 2).



Figs. 2, 3, and 4.—Showing various views of the eye bandage applied

With a little practice, the length of the oblong opening (Fig. 1) can be judged so that it will be cut of the proper size to permit of the upper part of the bandage to go high on the back of the head and the lower part to go low enough on the neck, as in Figure 3. The position of these strands (Figs. 3 and 4) regulate the staying quality of the bandage; if too far apart, the upper strand will slide forward over the top of the head; if too close together, both strands will slip up or down. Lastly, the tails for tying the bandage should be formed (Figs. 1 and 4).

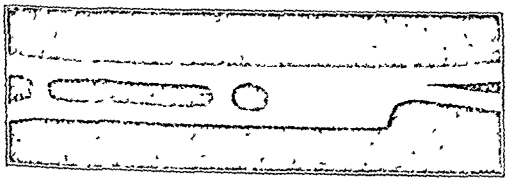


Fig. 1.—An improved bandage for the eye

TREATMENT OF VARICOSE ULCERS BY LEGGINGS

J. B. MURPHY, M.D.
CHICAGO

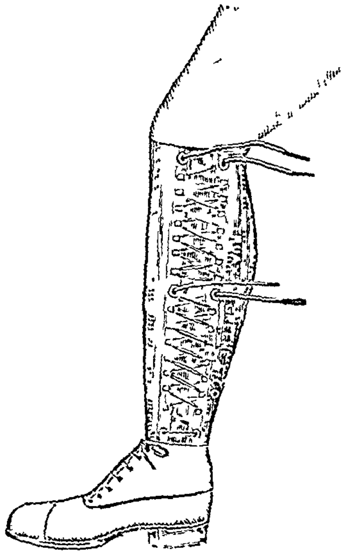
Varicose ulcers, in cases in which operation is refused or inadvisable, or in the smaller type of ulcers in which it is deemed unnecessary, can all be cured by the application of uniform, inelastic pressure from the ankle to the knee. The difficulties heretofore encountered have been, first, to obtain an apparatus which will give this uniform support, and, second, to have one that is convenient and easily applied. For many years I have used silicate of sodium to make a clam-shell cast to fit accurately and produce uniform compression over this entire area. It is put on in antero-posterior, anterolateral or lateral halves, and as the swelling and edema of the leg recede the edge of the cast can be cut so that the pressure or support of the vessels may not be diminished. The ulcerated area itself should be covered with a strip of gutta-percha paper or oiled silk overlapping it one-half inch on all sides, with no other antiseptic or aseptic dressings. There will be no discharge from this surface on account of the pressure, and the cast may remain for a week or ten days without odor or discomfort from the secretion, as it is a well-recognized fact that granulation tissue firmly compressed gives practically no secretion.

On account of the inconvenience of application and changing of this cast I have devised a "leg corset" or legging that fulfills all the physical requirements of the silicate splint. The pressure can be accurately regulated, and uniform inelastic support is given from the ankle to the knee. It is removed at night, if necessary, and replaced in the morning. The support should not be elastic. The great drawback of the stocking and the Martin bandage is that they are elastic and, therefore, do not give uniform, consistent and continuous support. The corset is made to accurately fit the leg, or is made over a plaster model of the leg, which is the better plan. The ulcer is dressed with a piece of gutta-percha paper overlapping it one-half inch on all sides, the latter covered, if desired, by a larger piece of oiled silk to protect the corset.

The corset or legging I now use is constructed of strong, heavy-grade linen or heavy silk and provided with a double lacer, as shown in the illustration. As the material is non-elastic, this is necessary to adjust the amount of compression accurately and readily at all points. The length of the legging must depend on the requirements of the case. It usually extends from the ankle to the head of the tibia. It should not, however, include the knee or ankle joints. If it is desirable to encompass the thigh as well as the lower leg, a second legging should be made similar to the first. Light, slender stays of material not affected by water are included in the body of the legging to prevent wrinkling. The tongue or flap is of specially firm material in order to avoid linear constriction, a condition that would otherwise occur when the lacers are tightened. All the material, including the lacers, is washable, thus securing sanitary conditions.

Careful measurements are necessary to obtain ideal results. In ordering from the instrument-maker measurements should be taken and a pen and ink drawing of the limb should be made showing the malleolus and popliteal line when the limb is flexed. The distance from the malleolus to the head of the tibia and popliteal fold should be stated; also the circumference of the limb one inch above the malleolus and at points above this up to and including the garter line at intervals of one inch. To secure accuracy these measurements should be noted on the drawing or chart.

Every varicose ulcer of the leg not involving an area of more than three-fifths of its circumference can be healed with this method without confining the patient to bed long. The mechanical support is so uniform and complete that the evil effect of the varicosity of the veins and the hydrostatic pressure is entirely overcome.



A "leg corset" for treatment of varicose ulcers

The corset is so light and so readily placed that it is no inconvenience to the patient. The sense of relief from the "leg fatigue" caused by varicose veins is striking. The process of repair of the ulcer is very much hastened. If the lacing line, as indicated in the drawing, comes over the ulcer, then it should be changed to some other position, preferably to the other side of the leg. With this inelastic binder one secures all the advantages formerly obtained with isinglass or silicate of sodium splint, while avoiding many of the disadvantages which the application of the splint entailed.

It will rarely be necessary to have a corset on the lower third of the thigh, and only occasionally is it needed around the foot. When, however, the enlargement of the veins in either of those positions indicates its application the support is made on exactly the same principles as in the corset encasing the leg. There is no elastic support, binder or stocking which favors the process of repair equal to the inelastic variety.

100 State Street.

A NEW CARDIOSCOPE TO BE USED WHILE ADMINISTERING CHLOROFORM OR ETHER*

ARCHIBALD W. ROBERTSON, M.D.
LITCHFIELD, MINN.

The accompanying illustrations show a new cardioscope which is useful in detecting any changes which may take place in the heart action during administration of chloroform or ether.

The disc or phonendoscope is small and flat with a metal tube protruding from one side to which is attached a long firm rubber tube divided by a Y at its distal end to connect with the rubber tubes which hold the small ear pieces. The disc is placed directly over that portion of the chest wall where the heart sounds are most distinctly heard and it is held firmly to the skin with a wide strip of adhesive plaster.

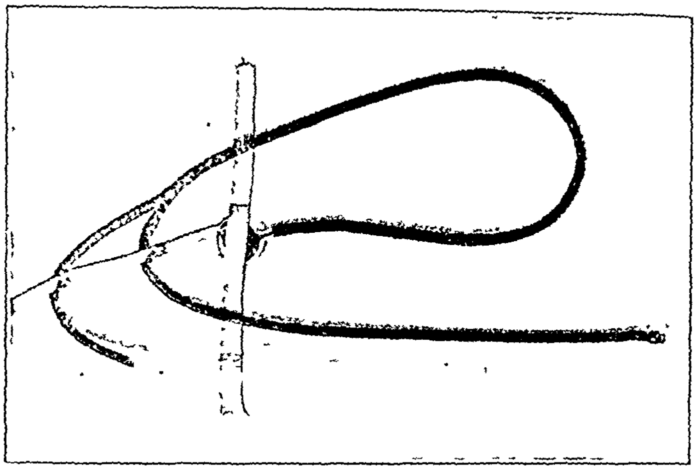


Fig. 1.—New cardioscope.

The rubber tubing passes backward under the clothing and up to the ears of the anesthetist. The anesthetist at any time can count the pulsations of the heart and at the same time have his two hands free to attend to his duties. The ear pieces are light and can be worn for hours without unusual discomfort and are not pressed against the head by springs as in the older styles of stethoscopes.

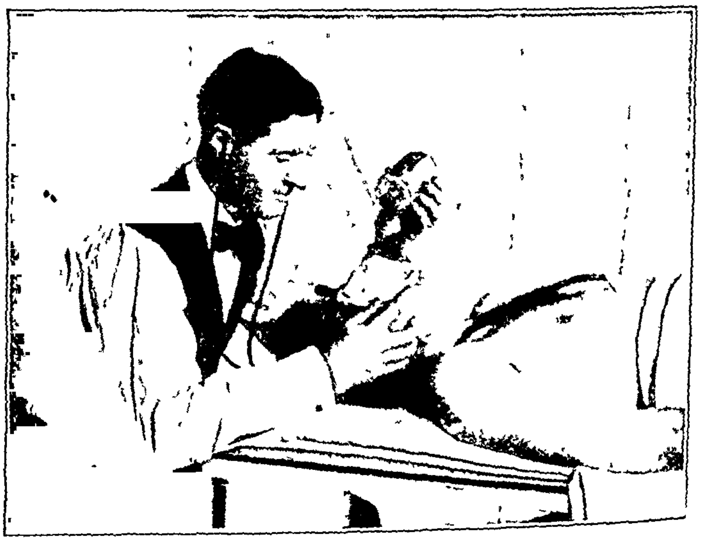


Fig 2.—The cardioscope in use.

This device has been used in the Robertson Hospital, Litchfield, and in office work for some time with satisfactory results, and I think that it is a great aid to the anesthetist.

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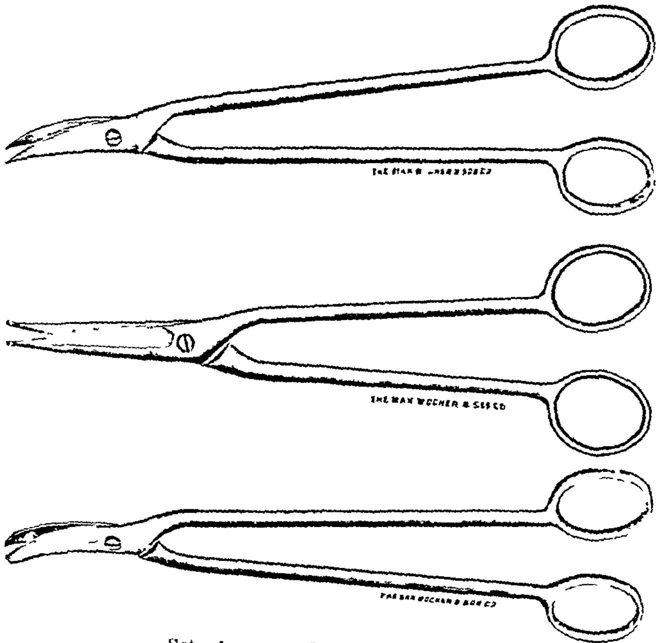
* Exhibited at the Crow River Valley Medical Society.

THREE NEW DESIGNS FOR OPERATING SCISSORS

JACKSON B. TAULBEE, M.D.
JOPLIN, MO.

The accompanying illustrations show a set of operating scissors designed by Dr. W. H. Taulbee, Maysville, Ky., and myself. The straight ones are combined puncture and dilating scissors. They can be obtained with needle or slightly rounded points. They are of special utility in puncturing, incising and dilating in operations for pelvic abscess and other conditions requiring vaginal incision and drainage. The others are, respectively, sharp-pointed and dull-pointed, right and left, curved dissecting and operating scissors. These are adapted to all work in deep cavities, such as the vagina, bladder, uterus, rectum and throat. The handles of each, being separated by a space when the scissors are closed, do not pinch or catch the folds of loose tissue, mucous membrane or gauze packing, as do those of other scissors: in addition, they may be used to great advantage in deep narrow spaces as retractors and depressors. The chief advantages common to all three instruments are the spaces between the bars of the handles of each, the length (8½ inches), weight and strength.



Set of improved operating scissors

311 Wall Street.

BISMUTH POISONING

TWO CASES, WITH ONE FATALITY, FOLLOWING INJECTION OF BISMUTH-VASELIN PASTE

V. C. DAVID, M.D., AND J. R. KAUFFMAN, M.D.
Members of the House Staff of Cook County Hospital
CHICAGO

The injection of bismuth-vaselin paste for the treatment of tuberculous cavities, sinuses and fistulas was introduced by Dr. E. Beck in April, 1908. Its use has been enthusiastically advocated by many and it is now a routine procedure in many of our hospitals. Numerous brilliant results have been reported. The simplicity of the technic, the uncomplicated formula of the mixture, and the painlessness of its administration, appeal to all who have charge of these chronic cases.

At the Cook County Hospital bismuth-vaselin paste has been used extensively, not only for tuberculous cavities and sinuses, but for empyemas, fistulæ in ano, and as bone plugs after mastoid operations, without fear of toxic effect It is therefore of marked interest to note that in the last four months two cases of bismuth poisoning have occurred following the use of a moderate amount of the paste.

A preliminary report of the cases is made at this time so that it may be more commonly known that toxic effects may result from the use of moderate amounts of bismuth-vaselin paste, and with the hope that conservatism may govern its use until further study establishes more clearly the limit of non-toxic dosage, the manner of its absorption, and the possibility of bismuth idiosyncrasy.

A more detailed report with the laboratory and autopsy findings of the fatal case and the further progress of the convalescent patient will be published later. The analysis of the bismuth used in the paste, and the urinary tests for bismuth, are under the consideration of Dr. Walter S. Haines.

It will be noticed that in both these cases the toxic effects were seemingly produced solely by the bismuth constituent of the subnitrate, no nitrite symptoms (dyspnea, cyanosis, etc.) being observed.

Case 1.—*Patient.*—W. E., an American, aged 24, single, bookkeeper, entered Cook County Hospital Aug. 31, 1908, on Dr. Ryerson's service He gave a history of discharging sinuses about the left hip, which had existed since an injury twenty-one years previously. Examination showed an ankylosed hip with healed and discharging sinuses anteriorly and posteriorly A clinical diagnosis of tuberculous hip was made.

Bismuth Treatment.—On September 8 three ounces of 33⅓ per cent bismuth vaselin paste was injected into the sinus on the posterior aspect of the hip. On September 28 a second injection of about six ounces of bismuth paste caused considerable immediate pain to the patient.

Effects of Bismuth.—Pain continued through the night so severe that the patient got scarcely any sleep. On the next day the temperature, which had been normal, rose to 101 F., but returned to 98 in the course of forty-eight hours. The sinus remained open and discharged some pus and small amounts of bismuth paste. Eleven days after the second injection the patient complained, on awakening, of pain in the mouth. From this time on an intense stomatitis rapidly developed. Pain and burning were very severe, and increased so much on attempted mastication and deglutition that the patient took very little of even liquid diet. The gums were swollen and extremely sore. The teeth became loose. A gradually widening, heavy greenish-blue line showed on the gums and on the tip and margins of the tongue. On the left side of the tongue small superficial ulcers appeared, which increased and coalesced until larger than the thumb-nail; the ulcer was covered with a dirty blue-black membrane. The fauces and throat showed the same swollen and pigmented condition. Salivation was constant, intense, and very distressing. Accompanying the stomatitis was some headache and a very marked constipation. The general condition remained fairly good with normal temperature, running to 99 F only occasionally.

After reaching its height the stomatitis gradually subsided so that at the end of six weeks the ulcerations and salivation had entirely disappeared and the patient was again on regular diet.

The patient complained of continued pain in the hip. An *x*-ray examination showed deposits of bismuth about the joint and a small necrotic focus in the great trochanter, which was removed by operation on December 7. An abscess, which formed in the thigh six days after the operation but which had no demonstrable connection with the operative wound, was aspirated twice under 2 per cent. cocain and finally freely incised. Large amounts of bloody pus and later masses of reddish discolored paste were discharged.

On December 21, several days after any cocain had been used, the patient, who previously had been quiet and well-mannered, became suddenly rather noisy, restless, and unable to sleep. During the day he was irritable, ugly, abusive to the nurse, and at times irrational. He also became very negligent about his person, showing a complete change in temperament.

At present, five months after the first injection of bismuth paste, the patient's general condition is much improved; the sinus is closed; the abscess nearly healed, and mental condition almost normal. The bluish deposit still remains on the gums in a deep blue line a little more than an eighth of an inch in width, extending to the very margin of the gums. Both the labial and lingual surfaces of the lower jaw are involved; more than those of the upper. Points of teeth contact on lips show blue outlines, especially marked opposite the canines. The tongue-tip and lateral margins extending to the under surface show areas of bluish discoloration, solid to first glance, but made up of punctate spots of bluish deposit slightly larger than a pin-point.

At no time was there any palpitation, dyspnea, cyanosis or dizziness.

Case 2.—*Patient.*—H. F., well-nourished white man, 21 years old, freight handler, entered Cook County Hospital on the service of Drs. Kahlke and Keyes, Dec. 31, 1908, complaining of lameness and presented a discharging sinus above inner third of right Poupart's ligament. The clinical diagnosis of tuberculous hip was made with some difficulty; but a skiagraph revealed an irregular area on the head of the femur. The patient's temperature varied from 98.6 to 103 for a few days after admission, depending somewhat on amount of pus discharge. Pulse was 80 to 90; respirations, 20.

Bismuth Treatment.—Six ounces of a 33⅓ per cent. bismuth-vaselin paste were injected into the sinus on Jan. 19, 1909; a skiagraph taken on the same day showed the bismuth shadow leading to the diseased head of the femur.

Effects of Bismuth.—Ten days after the injection the patient complained of soreness of his gums and an increased flow of saliva. An examination of the mouth revealed a light greenish-blue discoloration of the gums, linear in character, about one-sixteenth of an inch from the incisor teeth on the lower jaw. The line was composed of pin-point puncta at first, but later became solid. There was increased flow of saliva at this time and subjectively, some nausea and anorexia. The next two days saw a further progress of the stomatitis. The blue line extended over the gums of the lower jaw, involving both the lingual and labial surfaces and remaining a little way from the margin of the teeth and gums. There was also on the lower lip opposite the incisors and especially on the lateral edges of the tongue a distinct blue discoloration of the mucosa, which seemed to follow the configuration of the teeth contiguous to them. At this period the salivation was extreme, the patient lying with his head over the edge of the bed drooling and groaning. His breath was becoming foul and he was taking no diet but liquids and this only when forced on him. His temperature was 98.8 to 99.6; pulse, 80 to 96; respirations, 20. He had some headache and nausea, but no dyspnea, tinnitus aurium, palpitation, or cyanosis of mucous membranes, ears, nose or finger-tips. On February 2 the patient was nauseated and vomited several times. There was then some superficial ulceration on the lateral surface of the tongue and labial mucosa. The blue line had become darker, a grayish blue. There were a few erythemic blotches on neck and face. The patient was restless and did not sleep; took diet with difficulty.

In the following week the stomatitis increased greatly in severity and the general condition of the patient for the first time was bad. The tongue was swollen, about twice the normal size, and showed marked areas of necrosis on the lateral surfaces, corresponding to the teeth imprint, with central gray sloughing area and blue margins. The labial mucosa on lower lip became much pigmented, with irregular areas of superficial necrosis. The gums showed marked necrosis at the junction of the teeth, and the blue line was darker. Blue pigmentation and irregular superficial ulceration appeared on the fauces and right tonsil. The lower lip and face were edematous and salivation was marked. There was some tenderness over the parotid glands but no swelling; moderate cervical adenitis. The patient complained of pain in the mouth and great weakness. Speech was difficult. He groaned constantly; was becoming very emaciated; had no appetite, and was constantly nauseated. He had slight epistaxis once. His breath was putrid. The pulse was weak, 100 to 120; heart, lungs and abdomen negative; temperature, 99 to 100; respirations, 20 to 24.

From this time on the general condition of the patient became progressively worse. Nervous symptoms, as marked restlessness, choreiform movements and insomnia developed. Involuntary defecation and urination supervened. The patient's mentality gradually became less acute and for two days before his death he was constantly irrational and in continuous motion. Decubitus sores developed on sacrum and over hip in spite of every precaution. At the time of his death, twenty-seven days after the injection of the paste and seventeen days from the date of the first toxic symptoms, his tongue was almost twice the normal size and its lateral surface was the seat of ragged dirty blue areas of necrosis which were also present on the lower lip and on almost the entire inner surface of the cheek which came in contact with the teeth. The fauces and tonsils were partially covered with blue pigmentation. The gums of the lower jaw were soggy and ulcerated but still showed the now almost black line. The upper jaw, except on the lingual surface, was not affected at any time to the same extent as the lower jaw. Salivation had ceased. The breath was very foul. The face and lips were swollen. The patient's body was markedly emaciated. Temperature was 104 F. just prior to death, but until a few hours before death had been almost constantly 99 to 100; respirations, 24 to 26, and pulse, 120.

A SKIN REACTION IN CARCINOMA FROM THE SUBCUTANEOUS INJECTION OF HUMAN RED BLOOD CELLS

PRELIMINARY REPORT

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NEW YORK

Numerous investigators have shown that if the blood serum of a patient suffering from carcinoma be mixed with normal human red blood cells hemolysis occurs. The reaction takes place in from 50 to 80 per cent. of cases of malignant disease. It occurs with considerable frequency in tuberculosis, and more rarely in other diseases.

It occurred to me that, by the injection of red blood cells under the skin of the carcinoma patient, it might be possible to produce a local reaction at the site of the injection. Logically, a local reaction should take place. Theoretically, such a reaction might prove to be a delicate one; it might give more positive and definite results than the test-tube method. In the technic which is used for the test-tube method the presence and degree of hemolysis is indicated by the amount of laking of the red cells—that is, by the amount of hemoglobin which has been set free. The tube reaction gives no evidence of substances which have been liberated other than the hemoglobin. A small amount of hemolysin in the serum which is being tested might not be capable of detection. If normal human blood cells are injected under the skin of a patient whose serum is hemolytic, fresh quantities of hemolysin would be continually carried to the cells, and, therefore, even a small amount of hemolysin might cause hemolysis of the cells. Every organic substance which was set free would enter the tissues and might there have its effect.

Accordingly, after some experimentation, and with the assistance of Dr. Neuhof and Dr. Geist of the house staff of Mount Sinai Hospital, normal blood was injected under the skin of patients suffering from a carcinoma or other disease. In patients with malignant disease a decided local reaction was observed. The technic employed was a very simple one. Under aseptic precautions, and with a syringe boiled in 0.85 per cent. salt solution, blood was aspirated from the median basilic vein of a normal individual (preferably a child), every possible precaution being taken to ascertain that the individual was healthy and free from hereditary or acquired disease. The blood was defibrinated and the cells washed four times in normal saline solution, care being taken that the washings and centrifugating was thoroughly done. A 20 per cent. emulsion of the red cells in normal saline solution was made and kept in the ice-box for twenty-four to forty-eight hours before it was used. Five minims of this twenty-four to forty-eight-hour old suspension of washed red blood cells were subcutaneously injected into the anterior surface of the forearm of the patient by means of a hypodermic syringe sterilized in normal salt solution. In the patients in whom a "reaction" was obtained the following changes were noted in the skin at the site of the injection: Three to twelve hours after the injection the affected area was slightly raised and slightly tender; it had a more or less well-defined margin; it measured 2 to 4 centimeters, and it was of a somewhat dusky red color. The changes in the skin reached their maximum within one to two hours, and the red area then began to fade, rapidly or slowly. Eight to twenty-four hours after the injection the skin lesion had either entirely disappeared, or, more often, a brownish, bluish or lemon-yellow discoloration remained, which persisted for a number of days.

In the patients who did not show this reaction there was either nothing to be seen at the site of the injection excepting the needle puncture, or a brownish discoloration of the skin, or a bluish discoloration, as is often seen after a hypodermic injection.

My investigations of this cutaneous lesion are very incomplete. I have given thirty-four injections to twenty patients with known carcinoma, and every case had a positive reaction. In most of the patients several injections were given of blood cells from various individuals. With succeeding injections the reaction was often less marked or absent. Of four patients with known sarcoma, three gave a positive reaction. Injections were given to over 100 normal individuals or to those suffering from diseases other than sarcoma or carcinoma. These included a variety of diseases, such as nephritis, tuberculosis of lungs, bladder, kidneys (seven cases), leukemia, syphilis (two cases), benign tumors, acute and chronic inflammatory affections, etc. In all but three cases the reaction was negative. One patient with a septic endocarditis gave a suspicious but not a positive reaction. Two other injections made in this patient were negative. This case was among the earliest of our series, and, therefore, must be accepted with caution. A patient who had been operated on for a large rapidly-growing lymphangioma of the suprapubic region, and who had a large postoperative hematoma of the scrotum, gave a marked positive reaction. A patient with gastric symptoms, absence of hydrochloric acid and presence of lactic acid, with a loss of thirty pounds in weight, gave a positive reaction. The operation failed to show any carcinoma. I obtained no reaction in several patients in whom malignant disease was suspected but in whom no malignant disease was found at operation or at autopsy, and have obtained positive reactions in several patients in whom carcinoma was not suspected but in whom carcinomatous disease was found at operation. Jaundice seemed to have no influence on the appearance of the reaction.

In order to gain a more definite idea of the causation of the skin changes described, normal defibrinated blood was laked with distilled water, and, after the tubes had been centrifuged, the supernatant fluid was injected into a number of patients. For purposes of control, hypodermic injections of sterile distilled water were given. All the patients, whether suffering from malignant disease or not, who received hypodermic injections of laked blood, presented a skin lesion similar to that described as present in carcinoma patients after the injection of washed red blood cells. This seemed to show that in the patients with carcinoma the reaction from the blood cell injection was due to a local hemolysis. In the normal individual or one suffering from some other disease, on the other hand, there was no hemolysis and, therefore, no reaction. When, however, the hemolyzable substances extracted from the red cells by laking were injected, the characteristic local lesions were observed. I have not yet been able to obtain pure human hemoglobin for injection purposes.

A fuller account of the technic employed and a more exact description of the cutaneous lesions observed, of the possible value of red blood cell mixtures, i. e., of suspensions of the mixed red blood cells of several individuals, of the possible value of some animal red blood cells for injection purposes, of the significance of the persistence or disappearance of the reaction after an operation, and many other aspects of the subject will be discussed in a future communication. The number of injections thus far given is far too small to allow of conclusions as to the reliability of this method for diagnostic purposes. The purpose of this preliminary report is to call attention to the fact that it is possible to cause a local reaction in the living body by the subcutaneous injection of washed normal human red blood cells, and that in patients with malignant disease, especially carcinoma, a characteristic and easily recognizable local skin lesion is caused by this injection.

Madison Avenue and Sixty-third Street.

A PRACTICAL METHOD OF DETERMINING THE OPSONIC INDEX *

E. F. McCAMPBELL
COLUMBUS, OHIO

The statement is frequently made by physicians that the technic of the Wright-Douglas vaccine treatment and the determination of the opsonic index is so complicated and burdensome that without a well-equipped laboratory the work can never become practicable.

While experimenting on some phases of opsonic work it occurred to me that some method should be devised to make the determination of the opsonic index available to the physician with limited laboratory facilities.

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* From the Bacteriological Laboratory of Ohio State University and the Pathological Laboratory of the Columbus State Hospital.

I have, therefore, devised and investigated the following method, which seems to be very efficient:

A culture of the bacterium to be opsonized is grown on agar-agar, blood serum or some other solid culture media and after incubation at 37 degrees C. for eighteen to twenty-four hours is washed off with a small amount of sterile 0.85 per cent. sodium chlorid and 0.8 per cent. sodium citrate solution.

In place of the regular capillary opsonic pipette the leucocyte counting pipette of a hemocytometer may be used. The bacterial emulsion is drawn up to the mark 0.5, then on up into the bulb. The blood of the patient whose opsonic index is to be determined is then drawn up to the mark 0.5, then on up into the bulb, where it is thoroughly mixed with the bacterial emulsion. The sodium citrate in the bacterial emulsion precipitates the calicum salts and prevents the coagulation of the blood which would occur without greater dilution with salt solution.

When the materials have been mixed the solutions are blown into the capillary portion of the pipette and a strong rubber band placed over the ends lengthwise, thus practically sealing it.

The pipette is now ready for incubation, which may be accomplished in a regular incubator at 37 C., or, if no incubator is available the pipettes may be incubated in the operator's axilla. The pipettes must be frequently rotated. After incubation for fifteen minutes or any desired period the material is blown out on a slide, the smear made and stained with carbo-thionin blue or some other equally good blood and bacterial stain.

The phagocytized bacteria may then be counted, averaged according to the regular methods, compared to a normal slide and the index thus determined.

It would seem from some of the experimental work that the sodium citrate caused a slight reduction in the amount of phagocytosis, probably due to some slight effect on the opsonins. I do not know whether this effect will be noted with all species of bacteria. This point will be determined later, as well as the most efficient concentration of sodium citrate and sodium chlorid combination. The action seems to be constant, however, and does not interfere with comparative tests. The erythrocytes seem to be slightly plasmolyzed by this method, but the leucocytes are unaltered.

By the above method the index may be determined in as short a time as an ordinary blood count can be made. Further results with this method will be reported later.

Therapeutics

ALKALIES

Few drugs are administered more frequently than are the alkalies, and they are often given, and frequently continued, without a perfect understanding of what they do in, and to, the system.

Dr. Eustace Smith, in the *British Medical Journal*. Jan. 30, 1909, opportunely instances the pathologic conditions for which alkalies are administered and the disturbances that their long administration may cause.

In the first place, it would be well to distinguish between antacids or drugs that act as alkalies in the stomach, and alkaline drugs that increase the alkalinity of the blood and tend to render the urine alkaline. The principal antacids are ammonia, chalk, lime water, magnesia, and sodium bicarbonate, while the drugs that are used to render the urine alkaline are, principally and best, the alkaline potassium salts such as the acetate, bicarbonate and citrate.

The antacids taken before meals, if in small doses and properly diluted, act locally to neutralize any stomach acidity that may be present, and are often soothing to an inflamed gastric mucous membrane. Smith advises that the dose of an antacid, if given three times a day, should be small, and that, as soon as it has ceased to be obviously beneficial, it should be discontinued. In large quantities on an empty stomach the antacids tend to increase the secretion of the hydrochloric acid, and if the stomach is stimulated day after day to combat this unnatural alkalinity the result can not be anything but deleterious, and they may cause the secreting glands to become enfeebled. Also if large doses of alkalies are administered they result in an imperfect gastric digestion.

If most alkalies are long continued the alkalinity of the blood is increased, secretions are modified, waste is promoted, and anemia may be the result. Even if the potassium salts are deemed advisable, they should not be too long continued, as a continued alkalinity of the urine is inadvisable on account of its tendency to cause cystitis. In some patients the bladder is very susceptible to the alkaline potassium salts and these individuals have an irritation of the bladder as soon as the urine becomes alkaline. It should also be recognized that, although we may render an acid urine alkaline, we still are often not treating the disturbance that causes the acid condition, and the disturbance may continue although the symptom of hyperacid urine has been changed.

Hyperacidity of the stomach, or hyperchlorhydria, is of frequent occurrence, due to too rapid eating, to the eating of too much meat, to the eating of too highly seasoned foods, to the use of too many irritant condiments, to nervous irritability, to high tension, and to worry. Such hyperacidity is better treated by eliminating, if possible, the cause of the trouble. Temporary relief, however, will always be afforded by the administration of an antacid, and the burning, distress, pyrosis, and flatulence that may be present will all be made immediately better by the administration of 1 gram (15 grains) of bicarbonate of soda. Such treatment is, of course, purely symptomatic. If it is advisable to give bicarbonate of soda, which is perhaps the best of all the antacids, three times a day, before meals, the dose should be smaller, perhaps generally 0.50 gram (7½ grains). It will act, as above stated, as a gastric sedative and will soothe the irritated mucous membrane, will cause a quicker outpouring of the hydrochloric acid, and will thus hasten the completion of the stomach proteid digestion; all of which will tend to make the disturbance and the dyspepsia better, but, unless there is actual inflammation of the stomach, is not treating the cause. If gastritis is present, no one treatment is perhaps more successful than the combination of bismuth and soda, as:

℞.	gm.		
Bismuthi subnitratis	20	or	ʒv
Sodii bicarbonatis	10		ʒiiss

M et fac chartulas, 20.
Sig.: A powder three times a day, before meals.

A glass of hot water taken a half-hour before the meal to wash off the mucus from, and to deplete, the inflamed gastric mucosa is, of course, excellent treatment.

It is not the purpose of this article to discuss the diet in gastric disturbance. It may be stated, however, that if the antacid is given after a meal the digestion of the starchy foods will go on longer than usual on account of the alkali keeping the contents of the stomach longer alkaline, viz., free hydrochloric acid or a large amount of acid peptones will not so soon be present to inhibit further salivary digestion.

If with the dyspepsia, or gastritis, constipation is present, some magnesium oxid should be added to the above prescription or substituted for the sodium bicarbonate. Also in hyperacidity the precipitated carbonate of lime is used, and is often a most successful treatment.

If an antacid is indicated and diarrhea is present, it is advisable to use lime water.

If an acu [illegible] present and there is palpitation or [illegible]. hysterical or other, the aromatic spirits of ammonia is perhaps the best antacid to use.

If for any reason alkalies must be administered for some time, it should be remembered that the sodium salts are better tolerated than the potassium salts, as potassium is depressent to muscles, while sodium is hardly a depressant at all.

If there is diarrhea with tendency to acidity of the intestinal contents, the official Mistura Rhei et Sodæ is often good treatment. Valuable also is the Pulvis Cretæ Aromaticus of the National Formulary, which may be given separately or combined with bismuth.

In combating intestinal acidity the alkalies should be the insoluble ones, of which magnesia is perhaps the best type.

The advisability or necessity for alkalizing the urine is not of very frequent occurrence. The administration of alkalies to render the blood more alkaline does not prevent gouty deposits and does not prevent the formation of uric acid. If the urine is hyperacid, or if there is a uric acid deposit in the urine, the administration of a sufficient amount of alkalies will prevent such deposit and prevent such acidity, but will not prevent the cause of the disturbance. As a solvent for crystalline or other deposits anywhere in the system nothing, perhaps, is better than pure distilled water. On the other hand, it is a fact that many lumbar backaches, with a tendency to the deposit of uric acid crystals in the urine, are made better by the administration of alkalizers of the urine.

When there is a tendency to myalgia or slight pains in the joints, and a physician is consulted, it is rarely that he orders alkalies without also regulating the diet, prescribing baths and exercise, and the drinking of more water. Consequently, it is doubtless rarely that the alkali alone renders the patient better.

In acute inflammations or irritations of the bladder or urethra alkalies should be administered, and generally with the result of modifying the irritation, the frequency of urination, and the pain.

The advantage derived from administering alkalies in sufficient amount to render the urine alkaline in acute rheumatism has not been completely demonstrated. Whether it is possible with alkalies to prevent or modify the cardiac complications is doubtful.

The salts best suited to render the urine alkaline are the salts of potassium, viz., the acetate, the citrate, and bicarbonate, and of these the citrate is the best, the best tasting and the least likely to cause stomach disturbance. The dose should be sufficient to render the urine alkaline, and should ordinarily be at least 2 grams (30 grains) three or four times a day, and more frequently if needed to accomplish the result aimed at. It may be administered in simple water or in an aromatic water, as:

℞.	gm.		
Potassii citratis	40	or	ʒix
Aquæ	200		fl.℥vi

M. et Sig.: Two teaspoonfuls, in water, three times a day, after meals.

There is no advantage in administering the lithium salts either as antidotes to gout, in gouty concretions or in uricacidemia, and large doses of lithia, or small doses long continued, are very sure to cause gastrointestinal indigestion.

Smith recommends the use of the citrate of sodium in the artificial food of infants. He adds 0.05 or 0.10 gram (1 or 2 grains) of the salt to each ounce of milk, and states that the alkali "joins with the caseinogen, displacing the calcium, while the citric acid unites with the latter base, forming a soluble salt which is absorbed into the circulation." By this method he forms clots that are easy of digestion.

When it is deemed advisable to give the bicarbonate of sodium in dyspepsia Smith advises the addition of a few grains of sodium chlorid to each dose, as "the latter salt has the property not only of aiding metabolism, but also of increasing the vitality and power of resistance of the red corpuscles. It also counteracts the tendency of the bicarbonate to form uric acid concretions."

In acute bronchitis "when the secretion is viscid and thick," Smith suggests the use of the alkalies, either the sodium or potassium salts, as tending "to increase the fluidity of the mucus and thus favor expectoration." He believes that the Liquor Potassæ, in small doses, is the best alkali to select for this purpose.

Smith calls attention to the value of bicarbonate of sodium solutions when applied externally to wounds or other lesions of the skin, such solutions being not only sedative but tending to promote healing.

Alkaline baths are, of course, used frequently to relieve irritation in such skin diseases as "eczema, psoriasis, urticaria, lichen, and prurigo." For this purpose from 5 to 10 ounces of the bicarbonate of sodium are dissolved in an ordinary bath.

For an ulcer that is slow in healing Smith recommends the use of a wash containing 1 gram (15 grains) to 30 c.c. (1 fluid ounce) of water, or a 3.5 per cent. solution. He has "seen large superficial ulcers which have resisted all previous measures begin at once to heal under the use of this simple alkaline dressing."

In whitlow, after the pus has been evacuated, "the bicarbonate of sodium solution, applied on lint under oiled silk, causes the pain and suppuration to disappear with remarkable quickness."

The advantage of the local application to inflamed parts is thought to be due to the raising of the alkalinity of the blood and thus promoting the phagocytic and healing activities of the blood.

Smith recommends the same alkaline wash "for burns, scalds, otorrhea and leucorrhea, and as a gargle in inflammations of the throat and tonsils." Also when there are decayed teeth the pain caused by the acid irritations is immediately stopped by the application of the bicarbonate of sodium solutions.

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[*For other information see second page following reading matter*]

SATURDAY, MARCH 27, 1909

THE SYNTHESIS OF PROTEINS

A series of observations which followed one another within a comparatively short space of time led to the inevitable conclusion that the mammalian tissues must possess the power of synthesizing proteins from simple crystalloidal organic compounds. Kossel and Fischer have shown clearly that the enormous protein molecule is merely an aggregation of simpler molecules of definite and known composition, and the former has also found that in some simpler types of proteins, the protamins, the number of different constituent aminoacids present need not be very large—perhaps only four or five. Cohnheim found that the intestinal mucosa contained an enzyme, erepsin, specifically adapted to converting the various products of incomplete digestion of proteins into the elementary aminoacids, apparently for the purpose of reducing all the heterogeneous proteins of our food into their fundamental components in order that the body may again build up, by recombining these components, its own particular sorts of proteins. Abderhalden and Rona and others found that the nitrogenous equilibrium of animals could be maintained by feeding them a diet in which in place of proteins there were substituted the products of proteins digested by trypsin until there was left nothing giving reactions for proteins, or even for peptones and albumoses. This last fact is presumptive evidence that the animal body can build up its tissue proteins from nitrogenous substances much simpler than the proteins, but this was still far from the actual demonstration of such a process accomplished outside the living body.

One direction in which to seek for a possible synthesis of proteins in the laboratory was indicated by the fundamental observation of Croft Hill that enzyme reactions are reversible, and tend always to produce an equilibrium between the processes and products of combination and disintegration. Kastle and Loevenhart particularly brought this reversible reaction into the realm of the body processes by showing that the action of fat-splitting enzymes is reversible and that fatty acids and alcohols may unite under the influence of lipase. A. E. Taylor first accomplished the synthesis of a natural body fat, tri-olein, by the action of a lipase from the castor-oil bean on oleic acid and glycerin. These observations indicated that in all probability the splitting of proteins into aminoacids by enzymes might be a reversible reaction, in which case it should be possible to cause synthesis of proteins by the action of proteolytic enzymes on aminoacids, if only the proper conditions could be found. The earlier attempts to reach the long-sought goal by this route were not successful, if we except the so-called plastein reaction, which consists of the formation of an insoluble protein-like substance when pepsin or trypsin is added to a solution of albumoses.

About two years ago Taylor succeeded better by using the digestion products of one of the simplest known proteins, a protamin from the salmon sperm. The composition of this particular protamin is remarkably simple for a protein, since it seems to contain only four of the different aminoacids, while ordinary proteins contain a dozen or more, and therefore it is particularly suitable for such experiments. Another important element in the success of these experiments seems to have been the use of an enzyme of exceptional stability, a trypsin from the liver of a Pacific coast clam. When this trypsin was allowed to act for a long time on the products of digestion of the protamin there appeared in the solution a small amount of a substance with all the characteristics of the original protamin.

Much more striking, however, are the results which Taylor has just now reported.[1] In these later experiments the aminoacids of the protamin were isolated by chemical methods, thus eliminating the possibility of the presence of any incompletely disintegrated portions of protein molecules, and the free aminoacids were allowed to stand in solution with the trypsin of the clam for four months. At the end of this time it was possible to isolate from the mixture no less than five grams of what seems to have been pure protamin, and which must have been formed through synthetic combination of the aminoacids under the influence of the enzyme. Here we have a definite synthesis of a protein in the laboratory.

To be sure, the protein is one of the simplest known, but none the less a protein. Also, to accomplish the synthesis an essential constituent of living cells, an enzyme, was required to push the synthetic reaction at a rate sufficiently fast so that an appreciable quantity of protein could be obtained, and therefore the process is not entirely removed from the realm of the living. Nevertheless, with our present understanding of enzyme actions, the part played by the enzyme consists merely in hastening a reaction which goes on much more slowly without the presence of enzymes, and, synthesis having been accomplished by the aid of trypsin, there seems to be no fundamental reason why synthesis may not likewise be accomplished without trypsin or any other product or component of living cells taking part in the reaction.

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[1] Jour. Biol. Chem., February, 1909, page 381; abstracted in this issue, page 1064.

MEDICAL HISTORY AND NON-MEDICAL WRITERS

In medicine, as in other arts and sciences, the men who did things in the past have frequently failed to write accounts of what they did, or else have assumed that their readers must be familiar with the details and the circumstances, and therefore have omitted to describe the latter. The consequence is that there are many distinct gaps in the history of medicine; but, fortunately, these may sometimes be filled out by the chance references of non-medical writers. Some interesting and important facts may be thus secured.

For instance, we generally take it for granted that the clinical teaching of medicine is a modern institution. Even such men as Lancisi in Rome, who seems to have been the first in modern times to gather students around the bedside of patients for educational purposes, and Boerhaave, who first systematized the method, apparently adopted it only in a limited way. That clinical teaching must have been rather common in Rome nearly 2,000 years ago, however, is shown by a famous epigram of Martial,[1] which runs as follows in Witherington's translation:

Languid I lay, and thou camest, O Symmachus, quickly to see me.
Quickly thou camest, and with thee a hundred medical students.
The hundred pawed me all over with hands congealed by the north wind.
Ague before I had none, but now, by Apollo! I have it.

To take another illustration, Plato long ago said, "The trouble with the physicians in our times is that they pay too much attention to men's bodies and too little to their minds." This appears to be an anticipation of the theory which forms the basis of psychotherapeutics. Petronius Arbiter, in one of his satires, declared that the main business of a physician was "to furnish satisfaction of mind to his patient." Other instances to the same effect might be added showing how the commonplace of the past becomes the vaunted discovery of the present.

Again, many clues to the history of surgical anesthesia may be gathered from the poets and other non-medical writers. Dioscorides, for instance, alludes to the employment of mandragora to produce anesthesia when patients are cut or burnt. Pliny refers to the odor of mandragora as causing sleep if it was taken before cuttings or puncturings, "lest they be felt." Lucian speaks of mandragora as being used before the application of the cautery. In modern literature such references multiply. In the fourteenth century Boccaccio, in the story of Dioneus, describes the effects of an anesthesia mixture which "being drunk would throw a person asleep as long as the doctor judged it necessary." In the fifteenth century William Bullein described a concoction of an herb "which bringeth sleep," and "casteth man into a trance until he shall be cut out of the stone." Du Bartas, in the sixteenth century, described the surgeon as "bringing the patient in a senseless slumber before he put in use his violent engines." At about the beginning of the seventeenth century Thomas Middleton wrote of "the pities of old surgeons who cast one asleep, then cut the diseased part."

These are some of the facts which, too commonplace at the time for the medical writer to mention, were noted and recorded by the layman because of their quality of wonder and novelty to him. They testify that history repeats itself in many respects and that we progress, not along straight lines, but in wavelike alternations of improvement and stagnation or retrogression. They seem to indicate, too, that we have made one probably permanent gain, and that nothing short of a cataclysm can ever break the continuity of medical records in the future. Medical science, like the other sciences, has grown too self-conscious and too careful of her own reputation ever again to leave to the chance layman the task of recording methods and technic.

BOVINE TUBERCULOSIS. FAMILY TUBERCULOSIS

The papers on tuberculosis contained in the present issue deal with two phases of the subject, one the relation of human to bovine tuberculosis, the other tuberculous infection within the family. Both have important bearing on the general problem of prevention, and can not be too often or too carefully considered so long as there are dubious points needing elucidation.

Pottenger's views, based on clinical observation of the reaction of patients with different forms of tuberculosis to human and bovine tuberculin, lead him to favor the idea that while both human and bovine bacilli may attack man the bovine bacilli gain a foothold with difficulty, probably on account of differences in the soil. Conversely, human bacilli gain a foothold in cattle with difficulty for the same reasons. In other words, while human and bovine bacilli are closely allied subspecies, which probably originated from a common ancestor, each has lived so long on a particular kind of soil that it develops poorly on any other. All this has been suggested before, and, indeed, this is not the most important part of Pottenger's paper. What is less well recognized is the fact that patients infected with human bacilli react less violently to bovine than to human tuberculin, and *vice versa*. In other words, as maintained by Raw,[1] immunity to human tubercle bacilli may be obtained by inoculating with tuberculin from bovine bacilli as surely as if tuberculin from human bacilli was used, and with much less risk of unduly violent reactions. In the case of gland, joint or meningeal tuberculosis, when due to bovine tubercle bacilli, tuberculin from human bacilli is the safest. The principle is essentially that of using a closely allied and less virulent disease to protect against a more virulent one,

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[1] Languebam: sed tu comitatus protinus ad me
Venisti centum, Symmache, discipulis.
Centum me tetigere manus Aquilone gelatæ.
Non habui febrem, Symmache, nunc habeo.

[1] The Journal, Oct. 10, 1908, p. 1259.

on "The Functions of the Medical School," and Henry S. Pritchard, president of the Carnegie Foundation for the Advancement of Teaching, spoke on "Standards of Medical Education."

Annex to St. Luke's Hospital.—Plans have been filed for the proposed enlargement of St. Luke's Hospital by a nine-story addition to be known as the Travers Pavilion. It will be seventy feet front and of a similar depth, and will harmonize in appearance with the existing group of buildings. Some of the special features will be a series of surgical operating rooms and examining rooms, an electrical room, a laboratory, a solarium and a roof garden. The building will cost $200,000 and will accommodate non-resident patients.

Personal.—Dr. Wolff Freudenthal has been appointed a corresponding member of the Laryngologic Society of Berlin, Germany.——Dr. William T. Godfrey, former house surgeon at the New York Post-Graduate Hospital, has opened an office in Stamford, Conn.——Dr. George M. Bennett, house surgeon at the Harlem Hospital, is reported to be in a serious condition from septicemia, due to an operation wound.——Dr. James P. Tuttle spent March 15 and 16 with friends in Nashville, and was the guest of honor at the Nashville Academy of Medicine, March 16, delivering an address on "Persigmoiditis."

In Memory of Dr. Bull.—Mrs. Bull has presented a bronze bust of the late Dr. William T. Bull, executed by Enid Yandell, to the New York Academy of Medicine.——Mrs. Bull has authorized the statement that she will build a hospital for the treatment of tuberculosis as a memorial to her husband. The amount of the endowment, location, and other details will be announced later.——The medical board of the General Memorial Hospital has adopted resolutions regretting the death of Dr. William Tillinghast Bull, a distinguished member of its staff, and one of the founders of the hospital, expressing its appreciation of the services rendered by Dr. Bull, and placing on record its own sense of great personal grief at the loss of a distinguished colleague and a warm personal friend.——A meeting was recently held at the home of Dr. L. Bolton Bangs, and a committee was appointed to discuss the question of erecting a fitting memorial to the late Dr. William T. Bull. It has been proposed to establish an institution for surgical research in connection with the Medical Department of Columbia University.

NORTH CAROLINA

January Deaths.—During January 278 deaths were reported in the state, equivalent to an annual mortality of 12.9 per 1,000. Chief among death causes were consumption, 56; pneumonia, 33; heart diseases, 32; and brain diseases, 16.

Personal.—Dr. Marshall H. Fletcher, Asheville, has been appointed a member of the city police commission.——Dr. Mont. R. Farrar, Greensboro, has removed to Nashville, Tenn.——Dr. Andrew H. Harriss, Wilmington, has been appointed major and surgeon, N. C. State Guard, vice Dr. Frank H. Holmes, Clinton, resigned.

Injunction Modified.—Judge Ferguson, in the superior court at Asheville, has made an order modifying his temporary injunction in the case of the Forest Hill Company and the Sisters of Mercy of North Carolina, restraining the sisters from continuing the construction of a tuberculosis sanatorium in Asheville. The modification of the original order permits the sisters to establish a sanatorium at "Ridgewood," but restrains them from the care of tubercular patients nearer the street than 190 feet, and nearer adjoining property than 30 feet. This permanently restrains the location of patients in tents close to the street or adjoining property.

OHIO

Fails to Prove Illegal Sale of Cocain.—Contradictory evidence offered in the case caused the discharge in the police court, March 6, of Dr. Frank J. Collison, Columbus, charged with the illegal sale of cocain. One witness for the pharmacy board admitted that he had served a term in prison, and the testimony of a colored witness was contradicted at every point.

Congratulation on Conviction.—Dr. George H. Matson, secretary of the State Board of Medical Examination and Registration, has written to the Cleveland *News* to congratulate it on the successful issue of the case against A. C. Goode and Adolph Slaughter, the men connected with the Dr. Boyd medical offices, who were arrested and prosecuted on the charge of conducting an immoral exhibition, on information furnished by the *News*.

Tuberculosis Sanatorium.—Ground has been broken for the erection of a temporary structure to be utilized by the Dayton Tuberculosis Society as a sanatorium. The building is located about six miles north of the city and will be ready for occupancy April 1. It will have two wards, one for men and one for women, and will accommodate twenty patients. Dr. E. B. Markey has been made physician in charge, and Drs. John S. Beck, Horace Bonner, Francis C. Gray and James M. Weaver make up the consulting staff of the institution.

PENNSYLVANIA

Medical Society Condemns Food Bill.—The Bedford County Medical Society at its recent meeting condemned the Todd pure food bill as reported by the senate committee on public health and sanitation.

Osteopath Bill Signed.—The bill creating a board of five examiners, before which every osteopath shall undergo examination before receiving a license to practice was signed March 19. The governor vetoed a bill of this character two years ago.

Trachoma Hospital Planned.—A bill introduced into the senate, March 17, asks for an appropriation of $22,000 to establish a trachoma hospital at Marcus Hook, the state quarantine station, $10,000 to provide a hospital for temporary treatment, $10,000 for an emergency fund, and $2,000 to support a resident ophthalmologist.

Philadelphia

Diphtheria at the University.—Four cases of diphtheria were reported among the students of the University of Pennsylvania, March 15. Four cases were also reported on the same date among the pupils of the Catto public school.

Visiting Nurses.—The report of the Visiting Nurse Society for 1908 shows that the nurses made 51,181 visits. The society reports that the expense of a nurse is about $900 per year and that she pays from 2,000 to 2,100 visits during that period.

Tuberculosis Camp for Poor.—Councils' finance committee has reported favorably on the ordinance to purchase seventeen acres of ground in the vicinity of Bartrum's Gardens for park purposes at a cost of $125,000 This site was selected by Mayor Reyburn as a tuberculosis camp for the city's poor.

Dr. Bennett Honored.—Dr. William H. Bennett, the founder of St. Christopher's Hospital for Children and instrumental in establishing the Children's Seashore Home at Atlantic City, has been honored by the establishment with an endowment of $6,000, of a free ward in the latter institution, to be known as the William H. Bennett ward.

Dinner to Dr. Mills.—About one hundred representative physicians of the city assembled at the Bellevue-Stratford, March 13, for the testimonial dinner to Dr. Charles Karsner Mills, the occasion marking the fortieth anniversary of his entrance into the medical profession, Dr. George E. de Schweinitz acting as toastmaster. Addresses were made by Drs. S. Weir Mitchell, James J. Putnam, Boston; Abraham Jacobi, New York City; William H. Welch, Baltimore; Charles L. Dana, New York City; Rev. Arthur B. Conger, and Provost C. C. Harrison of the University of Pennsylvania. A silver loving-cup was presented to Dr. Mills by Dr. William W. Keen on behalf of those present.

GENERAL NEWS AND COMMENT

The President's Physicians.—President Taft has selected Lieutenant-Colonel Guy L. Eddie and Captain Matthew A. DeLaney, Medical Corps, U. S. Army, as his physicians during his term in the White House.

Archives Discontinued.—The editors of the *Archives of Otology*, Drs. Herman Knapp and Arnold Knapp, New York City, announce that this publication came to a close with the number for December, 1908, which completed the thirty-seventh volume.

Warning Concerning Agent.—Physicians are cautioned to pay no money for THE JOURNAL or the Association to one giving the name of J. W. Holman or P. W. Corzilius. He has recently been working the profession in Ohio around Cincinnati and Dayton. He is of medium height, rather stout, and about 60 years of age. Any information as to his present whereabouts will be appreciated.

Hamlet with Hamlet Left Out.—According to *Signs of the Times*, the Sacramento, Cal., Ad Club recently presented an advertising tragedy of Hamlet with the part of Hamlet left out. It discussed the to it important question, "Should the Medical Profession Advertise?" from the viewpoints of ad man, druggist, newspaper, and layman. The viewpoint of the physician presumably is too insignificant for consideration; or perhaps it may be that the physicians of Sacramento are solid in supporting the traditional view, and do not consider the question one open for discussion.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, March 13, 1909.

Death of the Editor of the Lancet

Thomas Wakley, L R C P., editor of the *Lancet*, died at his residence, Hyde Park Gate, from hepatitis He was 58 years old and was the only son of Mr. Thomas Henry Wakley, the late editor of the same journal, who died nearly two years ago, and a grandson of Thomas Wakley, who founded the *Lancet* in 1823. During its long career the journal has been owned and edited by members of the Wakley family The late editor was the fourth to occupy the chair, and well maintained the traditions of the *Lancet* as the leading medical journal in the British empire, whether as a record of scientific progress or as a champion of the interests of the profession. Like his father and his uncle who preceded him, he did not write much himself, but he was keen in discovering men who could write and what they could write. He read carefully all his proofs and was punctilious in correcting them and in maintaining the high literary standard which has always distinguished the *Lancet*. He leaves a son, aged 4, and for the first time since its foundation the editorship of the *Lancet* has necessarily passed out of the Wakley family, but it will probably be conducted on the same lines as heretofore.

Smallpox

An outbreak of smallpox has occurred in Bristol under peculiar circumstances. The first case was that of a dock-laborer who had been unloading barley, and it was thought that the disease was brought from eastern Europe. Twenty-three cases followed, with three deaths In one case the disease was not diagnosed, and the patient was removed to a hospital with the result that the ambulance driver and others were infected. The patient died, the body was taken home, and his friends held a wake, which was attended by 40 or 50 people, several of whom contracted the disease. At Bolton two cotton-mill workers have contracted smallpox. It is suggested that the disease was derived from bales of imported cotton. After enjoying an immunity of the disease for five years, two cases of smallpox have occurred in London.

Importation of Diseased Meat

Dr H. Williams, health officer of the port of London, has made a serious report on a consignment of offal which arrived from the United States. It consisted of 654 cases of ox tongues, ox kidneys, ox livers, ox tails, tripe, lamb sweetbreads, lamb livers, lamb plucks and calves' tongues. There were 250 boxes of plucks, of which 13 were thawed for examination. Each box contained 12 sheep plucks, and out of the 156 no fewer than 16 of the livers and one of the lungs were found diseased It was therefore decided to examine a further 45 boxes, with the result that 45 livers and 3 lungs were found diseased. The remainder were then examined, and in 2.400 plucks there were found 528 diseased sheep livers and 130 diseased lungs All the boxes bore a label stating that they had been examined in the United States On the same ship were 300 frozen pig carcasses; 15 of them were thawed and found to be minus the lymphatic glands, in addition to one which showed tuberculosis. The removal of the lymphatic glands was considered evidence that when examined in the United States they had shown signs of disease.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, March 9, 1909.

Election of M. Paul Strauss to the Academy of Medicine

At its last session the *Académie de Médecine* had to elect an associé libre in place of M Chamberland, deceased. On the first ballot, M Paul Strauss was elected by 66 votes against 12 for Dr. Voisin, physician to the Salpêtrière, 3 for Dr. Capitan, professor at the School of Anthropology, and 1 for Dr. Castex, a well known laryngologist. M Strauss who is senator for the Seine department, has won a prominent position in parliament by his studies of questions of public hygiene, hospitalization, assistance, etc. He presides over the superior council of the *Assistance Publique* and the superior council for infant wards of the state. He has published some works that are highly esteemed, among them "*Dépopulation et Puériculture*," "*La Croisade sanitaire*," and "*Habitations à bon marché*." He is editor of the *Revue philanthropique*, a magazine devoted to questions of medical assistance, the struggle against alcoholism and tuberculosis, unhealthy dwellings, etc

The Examination Determining Eligibility to Assistant Professorships

March 3 a deputation of candidates for the *concours d'admissibilité à l'agrégation* accompanied by representatives of the *Société de l'internat des hôpitaux*, the *Association corporative des étudiants en médecine*, the *Syndicat des médecins du département de la Seine*, etc., waited on the minister of education and presented a document summarizing the objections of the rank and file of the profession to the new regulation restricting the competition for professorships to those who have passed this preliminary "admissibility" examination. [The history of this new *concours* has been related in preceding Paris letters and also in Osler's "Impressions of Paris" in THE JOURNAL, Feb 27, page 703] Chief among the numerous objections to it is its tendency to emphasize and reward didactic theory rather than the practical side of medicine The minister received the deputation cordially and promised to weigh carefully the arguments presented, but he has declared himself resolutely opposed to the introduction of the German system of privat-docents and to the autonomy of the medical schools.

The Prophylaxis of Contagious Diseases in the Army

The undersecretary of the war department ordered some months ago that all cases of contagious disease that should appear at any point whatever should be reported to him daily by telegraph. *In order to ensure—independently of the measures* taken under such circumstances in virtue of other regulations—rapid and systematic prophylactic action, he has recently organized at the war department a permanent technical section for the prophylaxis of infectious diseases in the army. This section, which will be presided over by Vaillard, and of which the professor of epidemiology and microbiology at the *école d'application du service de santé* shall be *ex officio* a member, will consist of ten military medical officers It will have as its duty, from the commencement of a disease capable of epidemic development, to send one of its members to the threatened point, that he may make on the spot the necessary technical investigations and apply every measure to prevent the spread of the disease, if these measures have not been already applied The technical section thus created will be provided with all the material appropriate for its duties, and particularly for the necessary bacteriologic examinations and researches. It will be a sort of flying column charged with the duty of detecting and giving battle to the contagious diseases wherever they may appear.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, March 3, 1909

National Association for Reduction of Infant Mortality

A week ago a German association for the care of infants was formed, to centralize the various state societies which have already been formed in most German states and which are otherwise independent. The first general meeting of the new organization will occur at Dresden in June of this year

Personal

Ludolph Brauer, professor of internal medicine at the University of Marburg, has been called to Greifswald in place of Minkowski. It is not certain that the call will be accepted

A few weeks ago Professor Pfluger celebrated the rare event of a 50 years' jubilee as a regular professor. He has spent the whole time in Bonn. On this occasion he received the great gold medal for science

Official Medical Oversight of Industries in Bavaria

While in England, Switzerland, Belgium and the Netherlands, physicians have for a long time assisted in carrying out the provisions of the laws for protecting laborers, no provision for medical inspection of trades or medical improvement of factory hygiene was made in Germany until a few years ago, when in Baden and Würtemberg a physician was appointed *(im Nebenamt)* advisor of the government department of labor and medical inspector of industries. This year a physician was for the first time appointed in Bavaria *(im Hauptamt)* as official expert advisor of the central inspection service for trades and factories, with the title of *Landes-Gewerbearzt.* He has the oversight of the hygienic protection of laborers within the limits of the trade laws and is also charged with ascertaining and removing conditions harmful to the workman or his environment. In addition, it is his business to investigate all injurious industrial conditions on notice of the trade inspection authorities, mine inspectors, official or private physicians, or the *Krankenkassen.* He is expected to supervise the hygienic relations of home workers and the smaller shops, as well as those of the larger industries. Finally he has charge of the royal museum of labor so far as the exhibits are of medical and hygienic interest as well as in regard to traveling exhibitions, lectures, etc. The instruction of workmen as to the special dangers incident to their trade and the means of preventing them and education in special and general hygiene will also form an important function of this official.

Spa Treatment for Relatives of German Soldiers

The soldiers of the German army, if hospital treatment is unsuccessful, are given, on the order of the regiment physician, a course of treatment at some spa, generally in Germany, but exceptionally even at Carlsbad, Marienbad, or Teplitz. Tuberculous soldiers are generally sent only to closed sanatoria, but in exceptional cases they also are treated at the public health resorts. Among the institutions available are the tuberculosis wards of the hospitals and a number of sanatoria for pulmonary disease. The members of the families of soldiers in active service also receive such treatment, and even tuberculous patients belonging to the families of the under officers who live in the garrison are sent to the tuberculosis sanatoria, if their residence in the garrison would endanger their environment. At Frankfurt a. M. there is a special society which provides a sanatorium at Idstein for the relatives of soldiers.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, March 6, 1909.

The Affair of Professor Strümpell

After the death of Professor von Schrötter, medical circles, through the senate of the medical faculty, recommended the appointment of Professor Strümpell, of Breslau, to succeed the former. The negotiations with Strümpell were conducted seriously; the latter has severed his connection with the university at Breslau, and Professor Chvostek, the temporary director of the deceased Schrötter's clinic, was recently notified that Strümpell would take over the clinic at the beginning of the summer term, one week after the Easter holidays. Yet up to the present the official appointment has not been announced in the *Wiener Zeitung*, the paper which publishes all government appointments. It is rumored that powerful influences are at work to hinder the appointment at the last moment. Such things have happened repeatedly before, and the senate of the university has decided to make this the last time by resigning in a body if the government rescinds its decision to appoint Strümpell. The affair sheds no favorable light on the university of Vienna, and the difficulty of inducing a good man to accept an appointment here will be markedly increased unless a radical change is effected.

Snow and the Purity of Air

The recent enormous snowfalls in this city have enabled the city analytical chemist to make a series of investigations on the purity of the air. The entire quantity of snow deposited during twelve hours was collected from the roofs of a number of houses in various quarters on week-days and on Sundays, and then analyzed. The amount of mineral matter was rather astonishing: besides coal particles, about 0.5 gm. of soot and common salt per ten kilos of snow, or about twenty tons of mineral and organic matter in the air covering Vienna. Free ammonia, organic ammonia and sulphuric acid were found in traces only in the Sunday snow, but the week-day snow held more, especially of sulphuric acid. Bacteriologic results were negative, the experiments offering no reliable data. It has been found that the amount of snow which descended over Vienna will be sufficient to prevent a water famine in 1909.

Pharmacology

Pharmacopeial Board Meets

The board of trustees of the United States Pharmacopeial Convention held a special meeting at the Hotel Stafford, Baltimore, March 12 and 13, 1909. A special committee, consisting of Dr. James H. Beal, Dr. H. M. Whelpley and Prof. Joseph P. Remington, was appointed to prepare a report of the work of the board of trustees since 1900 and make recommendations to be submitted with this report at the 1910 convention. Arrangements are being made for the convention, which will be held at Washington, May 10, 1910. Medical and pharmaceutical teaching institutions and state organizations are requested to send credentials for delegates to the secretary of the board of trustees, Dr. Murray Galt Motter, Hygienic Laboratory, Twenty-fifth and E streets, N. W., Washington, D. C. The board adjourned after voting to hold the annual meeting at Chicago, May 21.

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION.]

UNGUENTINE

W. A. Puckner and A. H. Clark

Attention has been called at various times to the fact that the value of a published "formula" to a proprietary remedy is in direct ratio to the reliability of the manufacturer publishing it. When medical journals first insisted on their advertisers letting physicians know the contents of the remedies they wished to sell them, medical literature reeked with formulas—some of them of weird and wonderful design. Since the advent of the Food and Drugs Act, which requires that labels shall approximate truthfulness, and particularly since the Council on Pharmacy and Chemistry has investigated a number of proprietary remedies, the publication of "formulas" is not so common.

Unguentine, manufactured by the Norwich Pharmacal Co., is one of those remedies whose advertisement for years always included "a formula"; more recently, however, this is not in evidence. In an advertisement which appeared about ten years ago, the "formula" given is:

"Carbolic acid .... 2 per cent.
"Ichthyol .... 5 per cent.
"Alum .... 15 to 16 per cent."

It was claimed that by a special process of their own, the manufacturers had eliminated most of the astringent properties of the alum rendering it non-irritant. It was also stated that "the base of Unguentine is pure petrolatum." Later the manufacturers seem to have changed the composition of their product, or at least the "formula" given in the advertisements was changed. Thus it appeared:

"Alum .... 15 per cent.
"Zinc oxid .... 5 per cent.
"Carbolic acid .... 2 per cent.
"Ichthyol .... 5 per cent.
"Aromatics and antiseptic oils with specially prepared petrolatum and animal fat base."

The introduction of zinc oxid, aromatic and antiseptic oils and animal fat was a new feature. Somewhat later, and particularly since the passage of the national Food and Drugs Act, no formula or other statement in regard to the composition seems to have appeared in the advertisements in the medical press. In the 1906 price-list (p. 170) the following formula appears:

"Unguentine represents:
"Alum (non-irritating) .... 15 per cent.
"Phenol .... 2 per cent.
"Ichthyol .... 5 per cent.
"Zinc oxid .... 5 per cent.
"Aromatic and antiseptic oils, with especially prepared petrolatum and purified animal fat."

In the price-list issued for 1908—after the Food and Drugs Act went into effect—the following appears:

"Unguentine represents:
"Alum compound (non-irritating)
"Phenol.
"Ichthyol.
"Zinc oxid.
"Aromatic and antiseptic oils, with especially prepared petrolatum and purified animal fat."

Thus the proportions are omitted, and alum becomes "alum compound," whatever that may mean.

In view of the conflicting statements made by the Norwich Pharmacal Company, in regard to their leading specialty, Unguentine, and especially because much stress was laid on the filing of their "guarantee" under the Food and Drugs Act, it was decided to ascertain of what Unguentine really consists.

From our analysis published in detail below,[1] we conclude that Unguentine contains not alum but aluminum acetate (small amounts of alum may be present as impurities in the aluminum acetate), zinc oxid, or more probably impure zinc carbonate, and that the entire quantity of both does not exceed 5 per cent. It contains no ichthyol, or if any but the merest traces, and less than 1 per cent. of phenol. The aromatic oils amount to not more than approximately 1 per cent. in all. The ointment-base is, in the main, petrolatum.

In Unguentine we have, therefore, another proprietary "specialty," regarding the composition of which indefinite, false or misleading statements have been made—this irrespective of protestation of honesty by the firm.

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[1] Analysis of Unguentine: Aluminum, zinc and sulphate ions were found in the residue after ignition, by the usual tests. Also on boiling Unguentine with dilute hydrochloric acid, aluminum, zinc and sulphate ions are found in the acid solution by the usual tests.

Phenol: Unguentine has the odor of phenol and a portion distilled in a current of steam gives a distillate which absorbs bromin and gives the ferric chlorid reaction for phenols.

Ichthyol: The presence of ichthyol in unguentine could not be shown by any test. As little as 1 per cent. ichthyol imparts to petrolatum the characteristic odor of ichthyol and a dark color. On boiling such a mixture with water, ichthyol will pass into the water and color it brown. Unguentine has no odor of ichthyol and on boiling with water no color is imparted to the water.

Carbonate: On extracting Unguentine with carbon disulphid a brownish white residue remains which effervesces with dilute hydrochloric acid. The gas has no odor. A part of this residue is granular and has a reddish brown color and the appearance of impure zinc carbonate.

Acetate: The residue insoluble in carbon disulphid when rendered acid with phosphoric acid and subjected to steam distillation yields a distillate which has an acid reaction. This distillate on neutralization with sodium hydroxid and evaporating to dryness leaves a residue a portion of which treated with concentrated sulphuric acid and alcohol gives a distinct odor of ethyl acetate. Another portion dissolved in water on adding ferric chlorid turns red and on boiling this mixture a reddish brown precipitate forms.

The portion soluble in carbon disulphid (the ointment base) when boiled with repeated separate portions of alcohol dissolves to some extent in the hot alcohol and on evaporation of the alcohol a residue remains which closely resembles the product claimed when beeswax is treated in the same way. The carbon-disulphid-soluble matter has a low iodin number and a low saponification value, indicating that it contains very little fat.

Substance insoluble in carbon disulphid. Twenty grams of unguentine was thoroughly extracted with carbon disulphid and the residue dried to constant weight at 100 C. In one experiment the residue weighed 0.9944 gm., or 4.97 per cent. A duplicate gave 0.9898 gm. residue, or 4.95 per cent.

Matter volatile at 100 C. Five grams dried to constant weight at 100 C. lost 0.109 gm. in weight, or 2.18 per cent.

Determination of aluminum zinc and sulphate. Ten grams of unguentine was boiled repeatedly with diluted hydrochloric acid. "In the solution obtained the aluminum (Al), estimated as aluminum oxid in the usual way, was found to be 0.216 per cent. and 0.205 per cent., average 0.211 per cent. of the unguentine taken. The filtrate from the aluminum estimation was made up to 500 c.c. In portion of 100 c.c. the zinc was determined as Zn NH_4PO_4 (*Ztschr. f. anal. Chem.*, 1900, xxxix, p. 273) and found to be 2.19 per cent. and 2.24 per cent., average 2.27 per cent. zinc (Zn). In another 100 c.c. the sulphate was determined as barium sulphate and 0.658 per cent. and 0.656 per cent., average 0.657 per cent. sulphate (SO_4) was found.

If unguentine contains alum, the amount of alum, as indicated by the aluminum found, should agree with the amount indicated by the sulphate found. The amount of aluminum found would indicate nearly 4 per cent. alum, while the sulphate is equivalent to only about 1.5 per cent. Since an acetate is present, we conclude that the substance spoken of as "alum," "alum compound" or alum "deprived of its astringent properties" is not alum, but, instead, aluminum acetate or probably a basic aluminum acetate, together with some alum. The per cent. of zinc found corresponds to 2.6 per cent. zinc oxid; since a carbonate is present, we conclude that some of the zinc is present as carbonate.

The combined amounts of zinc oxid or carbonate and aluminum acetate can not exceed 5 per cent. of the ointment, since approximately 95 per cent. of unguentine is soluble in carbon disulphid. Also the total amount of phenol and aromatic and antiseptic oils can not exceed 2.18 per cent., since that is all that is volatile at 100 C.

Phenol: The estimation of phenol, according to the method which we devised (The Journal, July 25, 1908, p. 330), indicated that unguentine contained 0.81 per cent. and 0.77 per cent., average 0.78 per cent. phenol.

Correspondence

The Evolution of Refraction and Its Necessity

To the Editor:—Notwithstanding the chaos that has apparently existed in medical literature and among ophthalmologists in reference to cause and effect of eyestrain, there has been evolved a well-defined consensus of opinion on the subject that to-day is recognized by the vast majority of the medical profession.

It is as great an error to be blindly conservative as to be wildly radical in reaching conclusions deduced from new problems that have been presented to the ophthalmologist during the past twenty-five years. During the formative period, the period of investigation, there is no doubt that too many ocular muscles were cut; too much stress laid on the disastrous effects of eyestrain, but from this experience have been established well-settled principles of optics and treatment. We still make our tenotomies, we refract more accurately than ever before, but in doing either we are guided by clinical experience that has made us conservative in both.

In this connection, it was with much surprise that I read some of the statements contained in the paper by the late Dr. St. John Roosa, which appeared in The Journal, February 13, p. 543. My own personal and clinical experience are so greatly at variance with the conclusions of Dr. Roosa that it is but just that they be recorded.

The last word on refraction was not said by Donders, in fact, has not yet been said. Among certain facts, self-evident to 90 per cent. of the ophthalmologic world to-day, are these: First, that accurate refraction was the exception rather than the rule until a very recent period. Second, no pardon need be asked of the profession or the laity if we demand that only the most accurate scientific work be done in correcting errors of refraction. This is the criterion in the surgical wo why, then, be satisfied with less than this in ophthalmol No writer has ever demanded more than correct refract objection has been made to the slovenly methods often by men who would disdain to do such work in other bran of medicine. Third, it is a well-established fact that strain does cause "morbid conditions of body and mind." 10,000 cases reported by an army of ophthalmologists led to these conclusions, the statements of no one man be accepted by the profession as an explanation to dissi this array of evidence. Many ophthalmologists, myself cluded, can give personal experience to negative such a tions as: "An eye of a moderate degree of hypermet without corneal astigmatism, other conditions being favor will do its work in a thoroughly satisfactory manner." never had "conjunctivitis, blepharitis ciliaris, mild forms of lachrymal catarrh, diplopia, vertigo and nausea," but I did have persistent migraine for fifteen years, which was entirely relieved by spheres. My hypermetropia was under + 2.00. I began using + .75 R. and L. for distance, gradually increasing to + 1.50. For ten years since using the above I have never had an attack of migraine. I am sure that the ophthalmologic world agrees with Parsons of London ("Diseases of the Eye," 1907) "Typical migraine may occur" as a result of hypermetropia. I have the record of 1,000 cases to controvert such a statement as "the fact is if glasses do not improve the vision . . . they are absolutely of no use."

One case more: In 1901, a well-known physician of Oklahoma asked me to refract his son who had been a confirmed epileptic for years. The father stated that the son had averaged twenty-five paroxysms a month for the prior six months. The week he came he had three in one day. They had tried all known remedies for epilepsy without avail. He was a muscular robust boy of 16 years. I gave him:

R. + .50 sph. + 2.00 cyl. axis 90 = 20/20
L. + 3.50 cyl. axis 90 = 20/25

Later the father wrote me that in the six months following the use of glasses the son had had five paroxysms, going eight weeks at one time without any. The family removed from the state, and I only heard from them once afterward, on

Aug. 2, 1905, the father called and stated that the son had had no paroxysms since the previous April. This is history. I have no explanation. I have no idea that spectacles are a cure all for epilepsy.

"There is no special difficulty in the attainment of this knowledge-refraction." How pleasing this must be to the spectacle vendor and the "three-months course" man, a graduate of a diploma mill optical school—it is so easy. As for myself and many other ophthalmologists I can say that after twenty-five years of work, both in America and Europe, no more perplexing problems confront us to-day than those of optical anomalies of the eye.

The position of retinoscopy to-day in the ophthalmologic world, in determining the refraction of the eye, is well stated by Parsons: "Retinoscopy is the most accurate method of refraction." And Jackson: "No other method (retinoscopy) is worthy of being used alone or having sole dependence placed on it."

The statement, "It is often interesting to see how well some of these do their work without being accurately fitted and nothing detrimental to the general health results," is but an illustration of the abuse the human body has endured, and will endure, but we do not often find the medical profession advising neglect and abuse because of this fact. If work is worth doing, it is worth doing well. To condone inexact, unscientific optical work is inexcusable. To be sure, the old world moved on "tolerable" without chloroform, morphin, quinin or antitoxin. The old doctors tell us how they "cut off legs" and had great success before the day of asepsis. The old Egyptians produced wonders without electricity, steam, the telephone or the mariner's compass. Moses and Socrates, Homer and Horace, Praxiteles and Demosthenes lived in those good old days without the telescope, microscope or printing press; notwithstanding all this, the world will, I imagine, cling for some time to these later-day baubles.

It is well known that many hyperopic children soon after birth develop squint, and that an early correction of the strabismus re-establishes ocular equilibrium. Here we find a moderate amount of refractive error producing in a marked degree muscular disturbance. In other cases it may not be squint, but a decided neurotic disturbance which results.

The thousands of individuals with no special ocular symptoms, no "watering of the conjunctiva of the lachrymal sac, inflammation of the edges of the lids, hordeola," who in 1908 went to the ophthalmologists seeking and obtaining relief from headaches, could hardly be convinced that an "almost infallible evidence against the existence of eyestrain in a given case is absence of ocular symptoms."

The dangers of papers of the nature of Dr. Roosa's lies, first, in that they are addressed to the general practitioner and might cause him to think that the last word had been said on this subject, and hence influence him to ignore ocular errors in which there was not marked loss of sight; second, the traveling glass peddler will take advantage of these extreme views to divert refraction into incompetent hands.

In the sharp criticism of the ophthalmologists who differ from us we must remember that we have no oracle of Delphi who by the wave of the pen can read out of the profession whom he will. L. Haynes Buxton, Oklahoma City.

The Collargol Report and the Practitioner's Need for the Council on Pharmacy

To the Editor:—The result of the collargol report[1] has been to intensify the feeling of distrust that has been growing during the last few years, of all pharmaceutical products that have not been absolutely proved of value. That sense of awe and unconscious tendency to "uncover" in the presence of an imposing row of new and expensive pharmaceutical produsts is disappearing. Am I missing important scientific facts, or has the physician become familiar with these products through gazing on artistically labeled packages recently received through the mail or from the hand of an agent, and by reading "incontrovertible facts" in a very dignified piece of advertising literature, closely resembling a reprint from a medical journal? Am I wrong to shun these bright labeled products, which the manufacturer tells me have certain definite actions, and 'proves" it by extracts from papers by well-known men? These abstracts we seldom read, or merely glance at, and usually fail to perceive that they prove nothing and that the author never intended they should. We only see the well-known name and think, "He evidently uses and has had success with this product."

Am I right in using pharmacopeial drugs, the actions of which are fairly definite and among which we can find something to get any physiologic action which is capable of being produced by drugs? But we know that such products as phenacetin, hexamethylenamin, etc., are valuable additions to our drug equipment, and yet they once were in the awe-inspiring row. How are we to distinguish the good from the bad, as the "literature" of the producers is in a large measure unreliable? The ordinary practitioner has not the facilities nor time to study out the useful new preparations, and why should he be any more ready to take the producer's word for a drug action than he would be to use every new serum or other biologic product before there is proof that its action is harmless, definite and useful? It is not scientific to accept everything that is brought to our attention by the producer. Why can not we have a tribunal to which these new products may be referred and let it throw out the useless and pass on the useful with a statement of definite action? It seems to me that the American Medical Association is the body to handle this problem and that an enlargement of the activities of the Council on Pharmacy and Chemistry would, to a large extent, settle this matter. We want reliable information on every new product that comes out that has any virtue and we do not want to do the experimenting ourselves.

H. S. Willson, Crystal, N. D.

Nature and Causes of Eczema

To the Editor:—In reading the article of Dr. M. B. Hartzell, on "The Nature and Causes of Eczema" in The Journal, Nov 28, 1908, one can not fail to observe with surprise that only one physician, Dr. Henry C. Baum, Syracuse, in discussing the causes referred to hyperacidity as an internal cause. I have seen many cases of eczema, not due to occupation, local irritation or poisoning through dyestuffs, and in which it seemed reasonable to look for other causes—internal causes, such as the ingestion of acid fruits, *e. g.*, plums, lemons or tomatoes I have seen several patients who developed acute and extensive eruptions, after eating these acid fruits, and in whom the prompt use of sodium bicarbonate, or salicylate in full doses, internally, rapidly relieved the symptoms. Many cases of eczema may be classed with rheumatism, neuralgia and urticaria, as diseases due to uric acidemia, or hyperacidity of the blood. W. A. Waters, M.D., Columbus, Miss.

Function of Adrenal Cortex

To the Editor:—In an editorial (March 13, 1909, p. 892) you refer to Dr. Guthrie's cases of infantile gigantism, in all of which, using this observer's own words, "adrenal tumors existed." As Dr. Guthrie fails to explain this phenomenon, I beg to state that six years ago I pointed out ("Internal Secretions," Vol. 1, 1903, ed. 1, p. 192 et seq.) that the overgrowth of acromegaly and gigantism was produced through the intermediary of the adrenals. I urged at the time that the adrenal secretion, after reducing the amount of oxygen in the pulmonary air became the constituent of hemoglobin which deals out this gas to the tissues and thus sustains (in so far as the rôle of oxygen is concerned) oxidation, metabolism and nutrition. That lesions of the adrenals *per se* capable of greatly exciting their functional activity should, under these conditions, likewise cause excessive nutrition and overgrowth, as in Dr. Guthrie's cases, is self-evident. I may add that these interesting cases contribute additional evidence to the many data, experimental and clinical (see *New York Medical Journal*, Feb. 20, 1909, p. 362), which have emphasized the correctness of my interpretation of the functions of the adrenals. C. E. de M. Sajous, Philadelphia.

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[1] The Journal A. M. A., Mar. 13, 1909, pages 862, 893 and 903.

Unauthorized Use of Names

To the Editor:—Is there any possible way of stopping the publication of one's name by the Imperial Information Bureau of St. Paul, Minn., in the so-called *Expert?* Mine is published in the volume just issued (vol. xi, No. 1), absolutely without any authority; and the names of many excellent men throughout the country, who I am sure would not lend their names to such publication. Even the name of a physician dead three years is contained in the list. The lay mind can hardly realize how painful and unjust such a publication is to us.

ANDREW P. BIDDLE, Detroit.

Book Notices

NEW AND NONOFFICIAL REMEDIES, 1909. Containing Descriptions of the Articles Which Have Been Accepted by the Council on Pharmacy and Chemistry of the American Medical Association, Prior to Jan. 1, 1909. Cloth. Pp. 168. Price, 50 cents. Chicago: American Medical Association, 103 Dearborn Ave.

This book and the quarterly supplements thereto which are to be published will be great time-savers to those physicians who have determined to use only such proprietary products as have been approved by the Council on Pharmacy and Chemistry of the American Medical Association. This compilation is really the first regular edition and presents the work of the Council in a new dress and with some desirable advances. The classification adopted permits an easy comparison of remedies of similar origin and properties. The most significant changes are the relegation of mixtures to the appendix and the introduction of a number of non-proprietary remedies which for various reasons have not been admitted to the Pharmacopeia. Therapeutic indications are omitted on the assumption that the physician will be able to apply his knowledge of the properties of the ingredients without aid, either from the Council or from the manufacturers. The non-proprietary remedies admitted to the body of the work are described as accurately and carefully as a painstaking search of the literature will permit.

The descriptions of processes of preparation, physical and chemical properties and physiologic action, contain a wealth of information concerning nonofficial remedies that can not fail to be of immense value to pharmacists and physicians. It is to be regretted that it has been impossible for the Council to publish equally authoritative facts and opinions regarding the therapeutic properties of the synthetics placed before the medical profession. Here, however, the book must be interpreted as a representation in the main of the claims of the manufacturers. This fact is shown by the prevailing use of the phrases "it is claimed" and "it is said to be useful" applied in some cases to statements of the truth of which there can be little doubt, but for which the Council evidently did not wish to take the responsibility. While this cautious course is much the safest, it is to be regretted that, so far, little has been done to test these remedies in the practice of disinterested clinicians who could speak with authority as to their therapeutic value.

The book contains a description of over 200 distinct remedies. Some of these already have an assured position; others are likely to fall into disuse, but the true attitude toward them should be a readiness to try them critically rather than reject them in a spirit of nihilism. The work is convenient in size and yet presents all the essentials.

CLINICAL LECTURES AND ADDRESSES ON SURGERY. By C. B. Lockwood, Surgeon to St. Bartholomew's Hospital. Flexible Cloth. Pp. 307. Price, $1.50. New York: Oxford University Press, 1907.

This is the second edition of Lockwood's lectures and addresses, most of which have previously appeared in medical journals. The material, which includes such subjects as the essentials of diagnosis on intra-abdominal inflammations, the immediate microscopic diagnosis of tumors during the course of operations, the relation of clinical pathology to diagnosis and treatment, etc., is drawn almost entirely from Lockwood's personal experience. His easy colloquial, personal style is a pleasant variation from the more didactic tone of many surgical text-books, even the occasional ramblings and diversions being interesting and profitable. In these later days of medical teaching, when the old plan of instruction by the preceptor has entirely gone out of vogue, we often miss the personal element in teaching due to the tendency to confine clinical work largely to laboratory methods. Such books as Lockwood's are not only full of instruction, but also possess an interest not always found in more formal writings.

CATARACT EXTRACTION. By H. Herbert, F.R.C.S., Professor of Ophthalmic Medicine and Surgery, Grant Medical College. Cloth. Pp. 391, with illustrations. Price, $3.75. New York: William Wood & Co., 1908.

This complete work on cataract is timely now that we are hearing so much of the various methods of operating on cataract in India. Five thousand cataract extractions form the basis of the work. The illustrations are in black and white and give many interesting details of the various stages of operation. Detail is the keynote of the book, many points being brought forth which are too frequently left to the imagination in similar reports. The intracapsular operation revived by Major Smith of Jullundur is thoroughly discussed and the results compared with the intracapsular operations of other Indian surgeons, and also with the results of the more usual forms of extraction.

TREATMENT OF GONORRHEA IN THE FEMALE. By Charles Leedham-Green, M.B., F.R.C.P., Surgeon to the Queen's Hospital, Birmingham. Second Edition. Cloth. Price, $2.00. Pp. 160. New York: William Wood & Co., 1908.

This handbook has been revised and a number of corrections and additions made. Of the latter are a description of Goldschmidt's new urethroscope, and a consideration of Bier's hyperemic treatment in gonorrheal arthritis. A number of new illustrations have been added to the text.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

HOMES COMMISSION REPORT

To the Editor:—In THE JOURNAL of March 13, page 895, reference is made to the "Report of the President's Homes Commission." How can I obtain this book?

C. F. HORNER, M.D., Tiskilwa, Ill.

ANSWER.—This report, which contains a vast amount of information of interest and value to physicians and to the public, is known as Senate Document No. 644. Write to your senator for a copy; if he fails to send one, write to the Superintendent, Senate Document Room, U. S. Senate, Washington, D. C.

DISINFECTION AFTER TUBERCULOSIS

To the Editor:—Please give information regarding the method of disinfection after death from tuberculosis. How should carpets and furniture be treated?

J. P. BRANDON, M.D., Essex, Mo.

ANSWER.—The best method of disinfection of the rooms is by formaldehyd gas and a very practical method of applying this agent is given in THE JOURNAL, July 14, 1906, p. 139. Other articles on the same subject appeared July 28, 1906, p. 288; August 18, p. 523; September 22, p. 952, and Jan. 12, 1907, p. 159. Carpets should be left in the room, and after the gaseous disinfection is over they should be subjected to thorough mechanical cleansing, and finally exposure to fresh air and sunshine if possible. The same treatment should be accorded to upholstered furniture. If parts of the carpet or furniture have been soiled by sputum or other discharges they should be wet with a strong solution of formaldehyd

UNTRAPPED SEWER-INLETS

To the Editor:—In a recent discussion pertaining to untrapped gullies a prominent manufacturer of sewer-pipe maintained that the sewer-gas escaping from these gullies or untrapped sewer-inlets placed at the edge of the sidewalk was practically innocuous to public health. While I am aware that sewer-gas is not as morbific as it was at one time held to be, and that flushing and ventilation palliate both the nuisance and the danger, I held that these inlets on the street and alley corners should be trapped. The odors issuing from them are often very offensive, and it seems self-evident that hundreds of these untrapped sewer inlets would not be without danger to the community. Kindly give me the benefit of your opinion G. C. W.

Answer.—There seems to be no evidence that under ordinary conditions the air of sewers contains any appreciable number of pathogenic bacteria The tendency of a current of air passing over moist surfaces to rid itself of all floating particles is undoubtedly in part responsible for the relative freedom of sewer air from bacteria of all kinds . Professor Winslow of the Massachusetts Institute of Technology has recently completed an exhaustive series of investigations for the National Association of Master Plumbers on the danger of the spread of bacterial diseases through sewer air, and his careful quantitative experiments have shown that this danger is so slight as to be practically negligible On the other hand, if offensive gases escape from sewer inlets in sufficient quantities to prove an active nuisance, such a condition would seem to call for remedy, even if on other grounds than those relating to public health There should be little trouble on this score, however, if the gradient of the sewerage system is properly laid down

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers U S Army, week ending March 20 1909.

Shimer, I A, major, died at Camp Overton, Mindanao, P. I, March 13, 1909

Roberts, W. M, capt, ordered, in addition to other duties, to perform duty as surgeon at *Sandy Hook Proving Ground, N J*

Morse, A W, Baker, F. C., and Reynolds, C R, capts, ordered to Washington, D C, for examination for promotion

Rockhill, E P, Kiersted H S, and Yost, J D, capts, ordered to San Francisco for examination for promotion

Roberts, W. M, capt, granted leave of absence for one month

Siler, J. F, capt, detailed to represent Medical Department of the Army at the meeting of the American Society of Tropical Medicine, Washington, D C, April 10, 1909

Ashburn, P. M, major, relieved from duty at Fort Banks, Mass, and ordered to San Francisco for duty at the Army General Hospital

Geddings E F., capt, ordered to Fort Howard, Md, for duty *on return from Cuba*

Gunckel, G I, dent surg, ordered to Fort Caswell, N C, for temporary duty.

Hussey, S W, dent surg, ordered to visit successively for temporary duty *Forts Wayne and Brady*, Mich

Ware, W. H, dent-surg, relieved from duty in the Philippines division and ordered to the United States; granted leave of absence for three months

Navy Changes

Changes in the Medical Corps, U S Navy, for the week ending March 20, 1909

Edgar, J M, medical inspector, detached from the Navy Yard, Boston, and ordered to the *Connecticut* as fleet surgeon of the Atlantic fleet.

Curtis L W, *surgeon, detached from* duty as fleet surgeon of the Atlantic fleet and ordered to the Naval Torpedo Station, Newport, R I

Spear, R, surgeon, detached from the *Rhode Island* and ordered to the Naval Medical School Hospital, Washington, D C

Peck, A E, P A surgeon, detached from the Naval Torpedo Station, Newport, R I, and ordered to the Naval Medical School, Washington D C, for instruction

Gardner, J E, medical inspector, detached from the Naval Recruiting Station Boston, and ordered to continue duty at the Marine Recruiting Station at that city

Thompson, E, surgeon detached from the Naval Station, Guantanamo, Cuba, and ordered to the Naval Station, Charleston, S C

Snyder, J J, surgeon, *detached from* duty in connection with the marine detachment at Port Royal, S C, and ordered to the *Rhode Island*

Riggs C E, surgeon, detached from duty with the Legation Guard at Pekin, China, and *ordered* home to wait orders

Grow, E J, surgeon, ordered to additional duty at the Naval Dispensary, Naval Medical School Hospital, Washington, D C

De Lancy C H P. A surgeon, retired, ordered home when discharged from treatment at the Naval Medical School Hospital, Washington, D C

Porter, F E, P A surgeon, detached from the Naval Recruiting Station, Detroit, and ordered to the Naval Recruiting Station, Boston

Backus, J W, P A surgeon, detached from duty at the Naval Hospital Naval Training Station, Detroit

Farwell W G P A surgeon, detached from duty at the Naval Hospital, Naval Home, Philadelphia, March 22, and ordered to the Naval Station, Guantanamo, Cuba, sailing from New York about March 26

Owens W D, P A surgeon, detached from the *Southery* and ordered to temporary duty on board the *Buffalo* and thence to duty with the marine detachment, Legation guard Pekin, China

Riggs, R E P A surgeon, detached from the *Texas* and ordered to duty with the marine detachment, Port Royal, S C

Winn, C K, asst surgeon detached from the *Missouri* and ordered to duty at the Naval Hospital, Newport, R I

Ames M H asst surgeon, detached from the *New Jersey* and ordered to the *Southery*

Ledbetter, R F, surgeon, detached from the Navy Yard Norfolk, Va and ordered to the Naval Medical School, Washington, D C, for instruction, April 15

Murphy, J F, P. A surgeon, detached from the Naval Station, Culebra, W. I, and ordered to the Naval Medical School, Washington D C, for instruction, April 15

Asserson, F A, P A surgeon, detached from the *Kansas* and ordered to the Naval Hospital Boston

Fiske, C N, P A surgeon detached from the Naval Recruiting Station, Minneapolis, and ordered to Washington, D C, March 31, for examination for promotion, and then to wait order

Flint J, asst-surgeon, detached from the *Connecticut* and ordered to the Naval Hospital, Naval Home, Philadelphia

Haynes J P asst surgeon, detached from the *Virginia* and ordered to the Navy Yard, Norfolk, Va, April 10

Persons R V detached from the Naval Hospital (command of), Mare Island Cal and ordered to command the Naval Hospital, Naval Home Philadelphia

Simons M H, medical inspector, detached from command of the Naval Hospital Philadelphia, and ordered to command the Naval Hospital Mare Island, Cal

McDonald, P F, P A surgeon, detached from the Naval Training Station Newport, R I, and ordered to duty at the Naval Hospital New York

Hoen W S P A surgeon, detached from the Naval Recruiting Station Oklahoma, Okla, and ordered to the Naval Hospital, Las Animas Colo

Rodman S S P A surgeon, detached from the Naval Recruiting Station Chicago, and ordered to the Naval Medical School, Washington D C, for instruction, April

Geiger, A J, P A surgeon detached from the Supply and ordered to the Naval Hospital, Mare Island, Cal

Munger C B, asst surgeon, detached from the Naval Proving Ground, Indian Head Md, and ordered to the Naval Medical School Washington D C for instruction, April 15

Reed T W asst surgeon detached from the *Colorado* and ordered to the Navy Yard Mare Island, Cal

Kuder W S asst surgeon detached from the *Minnesota* and ordered to the Navy Yard Philadelphia

Hayward A B asst surgeon, detached from the Naval Recruiting Station Dallas Texas and ordered to temporary duty on board the *Independence* and thence to the *Colorado*

(Orders issued by the commander in chief of the Pacific Fleet)

Fatenholt, A surgeon, detached from the *Maryland* and ordered to the *West Virginia*

Ralson T M asst surgeon, detached from the *West Virginia* and ordered to the *Maryland*

Bertolette, D N medical director, detached from the Naval Recruiting Station Philadelphia, and ordered to command the Naval Hospital Washington D C

Nash, F S, surgeon detached from the Navy Yard Washington, D C, and ordered to the Naval Recruiting Station, Philadelphia

Stone, E P surgeon, detached from the *Rhode Island,* and ordered to the Navy Yard, Boston

Allen, A H asst surgeon, detached from duty at the Naval Hospital Las Animas Colo, and ordered to the Naval Recruiting Station, Oklahoma Okla

The following assistant surgeons have been detached from instruction at the Naval Medical School, Washington, D C

Lane H H to the Naval Station, Hawaii

Allen D G, to third squadron, Pacific Fleet. (Passage on *Buffalo* May 15)

Smith C W, to Naval Hospital, Naval Home, Philadelphia

Whiteside L C, to the *New Jersey*

Pollard J B, to the *Missouri*

Stanley A C, to the *Virginia*

McDowell R W, to the *Connecticut*

Mackenzie, E G to the Kansas

Shippen, L P, to the Naval Recruiting Station, Minneapolis

Schmidt L M to the Naval Recruiting Station, Chicago

Sterne, C F, to the Naval Recruiting Station, St Louis

Shepard, G W to the Naval Station, Culebra, W I, March 27 1909

Toulon A J to the *Supply*, April 10, 1909

Johnson L W, to the *Minnesota*

Chambers W, to the Naval Recruiting Station, Dallas, Texas

Noble D H, and Dodge, A H, to Naval Hospital, Las Animas Colo

Henry R B to the Naval Magazine, Iona Island, N Y

Whitmore, G B to the Naval Proving Ground, Indian Head Md

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine Hospital Service for the seven days ended March 17, 1909

Cobb, J O surgeon *granted 2 days' leave of absence from* March 9, 1909 on account of sickness

Weitenbaker, C P, surgeon, directed to report at Bureau on special temporary duty and on completion of the duty to rejoin his station

Young, G B, surgeon, detailed to represent the service at the fifth annual conference of the Council on Medical Education of the American Medical Association to be held in Chicago April 5, 1909

Rosenau M J surgeon directed *to proceed to Philadelphia* on special temporary duty

Nydegger James A, surgeon, on the arrival of P A Surgeon Charles W Vogel, directed to proceed to Pittsburg, Pa, and assume charge of the Service

Lavinder, C H P A surgeon, detailed to represent the Service at the sixth annual meeting of the American Society of Tropical Medicine, to be held in Washington, D C April 10 1909

Anderson John F, P A surgeon, directed to proceed to Detroit on special temporary duty

Ramus Carl, P A surgeon, granted 2 days' leave of absence from March 4 1909, on account of sickness

Vogel, Charles W P A surgeon, relieved from temporary duty at the Hygienic Laboratory and directed to proceed to Stapleton, N Y, and report to the medical officer in command for duty and assignment to quarters

McCoy, George W, P A surgeon, directed to proceed to Berkeley, Cal, on *special temporary duty.*

Creel, Richard H., P. A. surgeon, relieved from temporary duty at the Hygienic Laboratory and directed to proceed to Chicago and report to the medical officer in command for duty and assignment to quarters.

Creel, Richard H., P. A. surgeon, granted 4 days' leave of absence en route to station.

Ashford, Francis A., asst.-surgeon, on arrival of Asst.-Surgeon R. M. Grimm directed to proceed to Stapleton, N. Y., and report to the medical officer in command for duty and assignment to quarters.

Grimm, R. M., asst.-surgeon, *on the arrival of P. A. Surgeon* R. H. Creel directed to proceed to San Juan, P. R., and report to the commanding officer of the U. S. Revenue Cutter *Algonquin*.

Fogarty, J. M., acting asst.-surgeon, granted 10 days' leave of absence from March 16, 1909.

Health Reports

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service during the week ended March 19, 1909.

SMALLPOX—UNITED STATES

Arkansas: Bethal, Jan. 25, 3 cases; Jonesboro, Jan.20-March 1, 20 cases; *Paragould, Feb. 1-March 9, 7 cases.*

California: Oakland, Jan. 1-31, 4 cases; San Francisco, Feb. 20-27, 6 cases.

District of Columbia: Washington, Feb. 20-27, 1 case.

Illinois: Benld, Feb. 15-18, 2 cases; Chicago, Feb. 27- March 6, 2 cases; Danville, March 1-7, 4 cases; Galesburg, Feb. 27-March 6, 1 case.

Indiana: Elkhart, Feb. 28-March 6, 2 cases; Lafayette, March 1-8, 1 case.

Iowa: Council Bluffs, Jan. 1-31, 9 *cases; Feb. 1-28, 4 cases.*

Kansas: Kansas City, Feb. 27-March 6, 1 case; Topeka, Feb. 20-27, 6 cases.

Kentucky: Covington, Feb. 27-March 6, 3 cases; Georgetown, Dec. 2-March 4, 31 cases; Paducah, March 1-7, 2 cases

Louisiana: Alexandria, Feb. 1-28, 9 cases; New Orleans, Feb. 29-March 6, 1 case, imported.

Michigan: Detroit, *Feb. 20-March 6, 2 cases.*

Minnesota: Minneapolis, Feb. 27-March 6, 11 cases.

Missouri: Kansas City, Feb. 27-March 6, 2 cases; St. Louis, Feb. 27-March 6, 2 cases.

Montana: Butte, Feb. 16-March 2, 2 cases.

Nebraska: Arlington, Jan. 25, 1 case; South Omaha, Feb 20-27, 5 cases.

New Jersey: Camden, Feb. 27-March 6, 2 cases; *Perth Amboy*, March 10, 6 cases.

New York: Buffalo, Feb. 28-March 6, 1 case; New York, Feb. 22-27, 1 case, 1 death.

Ohio: Cincinnati, Feb. 26-March 5, 9 cases; Cleveland, Feb. 26-March 5, 2 cases; Columbus, Feb. 28-March 6, 1 case.

Pennsylvania: New Castle, Feb. 1-28, 2 cases; Prompton, Feb. *2-March 4, 8 cases.*

Tennessee: Memphis, Jan. 1-31, 61 cases; Nashville, Feb. 28-March 6, 10 cases.

Texas: El Paso, Feb. 23-March 2, 1 death; San Antonio, Feb. 27-March 6, 3 cases.

Utah: General, Jan. 1-31, 237 cases, 1 death.

Virginia: Caroline county, March 9, 1 case.

Washington: Tacoma: Feb. 14-March 7, 8 cases.

Wisconsin: La Crosse, Feb. 27-March 6, 2 cases.

SMALLPOX—FOREIGN

Algeria: Algiers, Jan. 1-31, 29 deaths.

Canada: Halifax, Feb. 20-27, 6 cases.

China: Dalny, Jan. 23-30, 1 death; Tientsin, Jan. 23-30, 5 cases, 1 death.

Egypt: Alexandria, Jan. 1-31, 8 cases; Cairo, Jan. 28-Feb. 4, 33 cases, 12 deaths.

France: Paris, Feb. 6-12, 4 cases, 1 death.

[illegible] Brunswick, Feb. 13-20, 1 case.

[illegible] Bristol, Feb. 13-20, 4 cases.

[illegible] Feb. 2-9, 12 deaths; Calcutta, Jan. 16-30, 181 [illegible] an. 30-Feb. 5, 1 death; Rangoon, Jan. 23-30, 2 deaths.

Italy: General, Feb. 14-28, 15 cases; Naples, Feb. 14-21, 21 cases, 5 deaths; Palermo, Jan. 23-30, 1 case.

Java: Batavia, Jan. 16-23, 3 cases.

Malta: Feb. 1-13, 2 cases.

Mexico: Jan. 23-Feb. 6, 19 *deaths*; Veracruz, Feb. 1-27, 1 case.

Persia: Arabistan, Feb. 3, *present*; Mechedisser, Feb. 3, present; Mohammerah, Feb. 3, present.

Portugal: Lisbon, Feb. 13-20, 1 case.

Russia: Moscow, Jan. 30-Feb. 13, 2 cases; St. Petersburg, Jan. 30-Feb. 6, 7 cases, 5 deaths; Warsaw, Jan. 2-9, 1 death.

Spain: Almeria, Jan. 1-31, 1 death; Barcelona, *Jan. 23-Feb.* 13, 15 deaths, Valencia, Feb. 6-13, 3 cases.

Tripoli: Tripoli, Feb. 6-13, 4 cases.

Turkey: Constantinople, Feb. 7-21, 4 deaths; Trebizond, Feb. 6-20, present.

YELLOW FEVER

Barbadoes: *General, to* Feb. 27, 54 cases, 16 deaths; Feb. 27-March 6, 2 *cases.*

Ecuador: Guayaquil, Feb. 6-13, 4 deaths.

Mexico: Merida, Feb. 21-March 6, 2 cases, 1 death; Ticul, Feb. 21-March 6, 1 case.

CHOLERA

India: Bombay, Feb. 2-9, 4 deaths; Calcutta, Jan. 16-30, 26 cases; Madras, Jan. 30-Feb. 5, 2 *deaths*; Rangoon, Jan. 23-30, 1 death.

Russia: General, Jan. 17-24, 304 cases, 129 deaths; Jan. 24-30, 201 cases, 60 deaths; St. Petersburg, Jan. 24-30, 193 cases, 52 *deaths*; Feb. 12, 43 cases.

PLAGUE

China: Amoy, March 16, present.

Ecuador: Guayaquil, *Jan. 6-23, 14 deaths.*

Egypt: Suakim, Feb. 1, 1 case.

India: General, Jan. 30-Feb. 6, 3,663 cases, 3,076 deaths; Bombay, Feb. 2-9, 28 deaths; Calcutta, Jan. 16-30, 27 deaths; Rangoon, Jan. 23-30, 21 deaths.

Turkey: Bagdad, Jan. 1[illegible]-23, 4 cases, 2 deaths.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Arizona: Phoenix, April 5-6. Sec., Dr. Ancil Martin.

Arkansas: *Three boards, each at Little Rock,* April 13. Regular Sec., Dr. F. T. Murphy, Brinkley; Homeopathic Sec., Dr. P. C. Williams, Texarkana; Eclectic Sec., Dr. A. J. Widener, Little Rock.

California: San Francisco, April 6. Sec., Dr. Charles L. Tisdale, Butler Bldg.

Colorado: Denver, April 6. Sec., Dr. S. D. VanMeter, 1723 Tremont St.

District of Columbia: Washington, April 13-16. Sec., Dr. George C. Ober, 210 B St., S. E.

Idaho: Boise, April 6-7. Sec., Dr. W. F. Howard, Pocatello.

Illinois: Northwestern University Bldg., Chicago, April 15-17. Sec., Dr. J. A. Egan, Springfield.

Minnesota: Old Capitol, St. Paul, April 6-9. Sec., Dr. W. S. Fullerton, 214 Am. National Bank Bldg.

Montana: The Capitol, Helena, April 6. Sec., Dr. W. C. Riddell

New Mexico: Santa Fe, *April 12. Sec., Dr. J. A.* Massie.

North Dakota: Grand Forks, April 6-8. Sec., Dr. H. M. Wheeler

Oklahoma: Guthrie, *April 13. Sec., Dr. Frank P. Davis,* Enid.

Rhode Island: State House, Providence, April 1-2. Sec., Dr. Gardner T. Swarts, 315 State House.

Utah: Salt Lake City, April 5-6. Sec., Dr. R. W. Fisher.

West Virginia: Huntington, April 13-15. Sec., Dr. H. A. Barbee, Point Pleasant.

Arizona January Report

Dr. Ancil Martin, secretary of the Board of Medical Examiners of Arizona, reports the written examination held at Phoenix, January 4-5, 1909. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 4, of whom 2 passed and 2 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED.		
Georgetown University	(1907)	88.2
College of Physicians and Surgeons, Baltimore	(1889)	87.7
FAILED		
Western Reserve University	(1896)	42.9
Willamette University	(1902)	69.6

Rhode Island January Report

Dr. Gardner T. Swarts, secretary of the Rhode Island State Board of Health, reports the written examination held at Providence, January 7-8, 1909. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 80. The total number of candidates examined was 8, of whom 4 passed and 4 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Baltimore Medical College	(1907) 80; (1908)	90.1
Jefferson Medical College	(1904)	86.1
Laval University, Quebec	(1908)	80.6
FAILED		
Baltimore Medical College	(1905) 72.9; (1907)	72.6
Laval University, Quebec	(1905)	69.2
University of Naples, Italy	(1905)	68.6

Marriages

Horace T. Sadler, M.D., to Miss Helen Bosler, both of Carlisle, Pa., March 6.

George W. Famous, M.D., Berwyn, Pa., to Miss J. Gertrude Cope, of Philadelphia, Pa., March 9.

Carl Stoehr, M.D., Big Stone Gap, Va., to Miss Elizabeth Rucker, of Washington, D. C., March 6.

Harry Hugh Ells, M.D., Charlotte, Mich., *to* Miss Marie Rowland Van Verst, of Detroit, March 18.

John Adam Kappelmann, M.D., Evanston, Ill., to Miss Jennie Hanson of Oak Park, Ill., March 18.

D. M. Ryan, M.D., Indian Mills, W. Va., to Miss Norene Myrtle Garten, of Forest Hill, W. Va., March 3.

Alfred B. Tucker, M.D., to Miss Martha Jones, both of Berryville, Va., at Waynesboro, N. C., March 11.

Archelaus Ernest Turrentine, M.D., Charleston, Miss., to Miss Mildred Davis, of Blytheville, Ark., March 16.

Deaths

Ferdinand Carl Hotz, M.D., one of the oldest and best known ophthalmologists of Chicago, died March 21, from pneumonia, aged 65. He was born in Wertheim, Germany, and after study in Jena graduated in medicine from the University of Heidelberg in 1865. He served as surgeon in the South German Army during the Austro-Prussian war in 1866, during 1867 and 1868 he was assistant surgeon to Knapp's Eye Clinic, Heidelberg, and a year later came to the United States and located in Chicago. He has been ophthalmic surgeon to the Illinois Charitable Eye and Ear Infirmary since 1876; professor of ophthalmology in the Chicago Polyclinic since 1888, and professor of ophthalmology and otology in Rush Medical College since 1898, and oculist to Cook County and Presbyterian hospitals. He was a member of the American Medical Association: one of the founders and once president of the Chicago Ophthalmological Society. He was made a director of the Chicago Public Library in 1875 and held this position until his death. His contributions to ophthalmologic literature have been frequent and valuable.

John C. Corbus, M.D. Cleveland (Ohio) Medical College, 1855; *a member of the American Medical Association*; surgeon of the Seventy-fifth Illinois Volunteer Infantry during the Civil War; for 27 years a member and for 12 years president of the State Board of Charities; from 1898 to 1906 superintendent of the Illinois Eastern Hospital for the Insane, Hospital; and for fifteen years a member of the board of U. S. Pension Examining Surgeons; died at the home of his son in Mendota, March 17, aged 75.

Dillon Brown, M.D. Harvard Medical School, Boston, 1885; professor of diseases of children in the University of Vermont; and adjunct professor of diseases of children in the New York Polyclinic; professor of pediatrics in the New York School of Clinical Medicine; physician to the New York Children's Hospital; editor of the *Journal of Pediatrics*; for many years house physician for the Savoy and Netherlands hotels, died at his home in New York City, March 16, from malignant disease, aged 48.

John Samuel Brownlee, M.D. Missouri Medical College, St. Louis, 1890; a member of the State Medical Association of Texas; and for 31 years a practitioner of that state; for eight years a member of the district examining board; for fifteen years health officer of Burnet county; and for several terms president of the Burnet County Medical Society; died at his home in Burnet, February 8, from heart disease, aged 56.

Robert George Redd, M.D. Ohio Medical College, Cincinnati, 1869; Bellevue Hospital Medical College, New York City, 1871; surgeon in the Army for about twenty years; and later surgeon for the Northern Pacific Railroad at Miles City, Mont.; at one time mayor of that city, and a member of the state senate; died at the home of his son in Crab Orchard, Ky., February 21, from locomotor ataxia, aged 66.

Hamilton Dox Wey, M.D. New York University, New York City, 1878; a member of the American Medical Association; president of the Medical Society of the State of New York in 1904 and 1905; a member of the Elmira Academy of Medicine; consulting physician to the Arnot-Ogden Memorial Hospital, Elmira; died in Callao, Peru, where he had gone for his health, March 16, aged 54.

John Lawrence Cleary, M.D. Pulte Medical College, Cincinnati, 1878; a veteran of the Civil War; a member of the State Medical Society of Wisconsin, and a charter member of the Kenosha County Medical Society; for two terms a member of the Wisconsin State Board of Control; died at his home in Kenosha, from cancer of the face, March 12, aged 62.

James H. Hamilton, M.D. Castleton (Vt.) Medical College, 1859; a member of the American Medical Association; acting assistant surgeon in the P. H. and M.-H. Service; for many years secretary of the Vermont State Board of Health; and at one time a member of the state legislature; died at his home in Richford, Vt., March 14, from nephritis, aged 73.

Alonzo Bishop Adams, M.D. Medical School of Maine, Brunswick, 1869; of East Wilton, Maine; a member of the Maine Medical Association; a veteran of the Civil War; secretary of the local board of health; and a member of the local board of U. S. Pension Examining Surgeons; died March 10, two days after an operation for appendicitis, aged 68.

Elias Carey Kitchin, M.D. Castleton (Vt.) Medical College, 1850; assistant surgeon of the Twenty-first Pennsylvania Volunteer Cavalry, and surgeon of the One Hundred and Fifty-fifth Pennsylvania Volunteer Infantry during the Civil War; died at his home near Brumfieldville, Pa., March 13, from senile debility, aged 81.

Sinclair Holden Glasgow, M.B. University of Toronto, 1878; M.D. University of the Victoria College, Coburg, Ont., 1878; lieutenant colonel of the Second Dragoons; president of the Ontario Medical Association; and division surgeon of the Grand Trunk Railway; died at his home in Welland, Ont., March 13, aged 53.

James B. R. Purnell, M.D. University of Maryland, Baltimore, 1850; vice-president of the Medical and Chirurgical Faculty of Maryland in 1900 and 1901; formerly physician to the county almshouse and health officer of Worcester county; died at his home in Snow Hill, March 7, from senile debility, aged 80.

James E. C. Sullivan, M.D. Louisville (Ky.) Medical College, 1872; of Cairo, Ill.; for many years a member of the American Medical Association; and a member of the Illinois State Board of Health; died in the Alexian Brothers Hospital, St. Louis, March 12, after a prolonged illness, aged 64.

George A. Dougherty, M.B.; C.M. University of Glasgow, Scotland, 1865; a member of the Medical Society of the State of Pensylvania; a member of the staff of the City Hospital, Washington, Pa.; died at his home in that city, March 12, from valvular heart disease, aged 69.

James William Walker, M.D. Bellevue Hospital Medical College, New York City, 1893; health officer and coroner of Lincoln, and later health officer of Pawtucket, R. I.; died at the Brown Hospital, Providence, R. I., March 13, after an operation for intestinal obstruction, aged 47.

James W. Bennett, M.D. Tulane University, New Orleans, 1859; a member of the Mississippi State Medical Association; and one of the oldest and most esteemed practitioners of southern Mississippi; died at his home in Brookhaven, March 13, from heart disease, aged 81.

John Franklin Minor, M.D. University of California, San Francisco, 1876; for several years surgeon on steamers of the Pacific Mail Steamship Company; and a practitioner of Alameda, Cal.; died suddenly in that city, from heart disease, March 11, aged about 50.

John James O'Connor, M.D. Harvard Medical School, Boston, 1888; a member of the American Medical Association; and for twenty years a practitioner of Holyoke, Mass.; died in the House of Providence Hospital, in that city, March 13, from nephritis, aged 44.

F. A. Alcibiades Belinge, M.D. Cooper Medical College, San Francisco, 1870; of Los Gatos, Cal.; formerly president of the Medico-Chirurgical Society of San Francisco; and a member of the commission on insanity; died in Lane Hospital, San Francisco, March 14.

Henry Tilford Nock, M.D. Hospital College of Medicine, Louisville, 1907; interne in the Kingston Avenue Hospital for Contagious Diseases, Brooklyn, N. Y.; died in the Kings County Hospital, Brooklyn, February 19, from yellow atrophy of the liver, aged 24.

Robert Andrews, M.D. Eclectic Medical College of Philadelphia, 1861; a member of the Medical Society of the State of New York and president of the village of Bergen for five terms; died at his home March 9, from dilatation of the heart, aged 72.

Erastus L. Wilson, M.D. College of Physicians and Surgeons, Baltimore, 1889; physician to the town of Lisbon, Maine; formerly a practitioner of Howard, R. I.; died suddenly while making a professional call in Durham, Maine, March 1.

Joseph J. Lawrence, M.D. Eclectic Medical Institute, Cincinnati, 1858; founder and for many years editor of the *Medical Brief*, St. Louis; a Confederate veteran; died at his home in New York City, March 14, from cerebral hemorrhage, aged 72.

Jabez V. Childers, M.D. University of Pennsylvania, Philadelphia, 1859; surgeon of the Third Tennessee Infantry, C. S. A., throughout the Civil War; a resident of Dallas, Texas, for 37 years; died at his home in that city, March 9, aged 76.

John G. Duckworth, M.D. College of Physicians and Surgeons, Baltimore, 1875; a member of the South Carolina Medical Association; *died at his home near Anderson, S. C.* from cerebral hemorrhage, February 10, aged about 60.

Noah F. Baker, M.D. St. Louis (Mo.) Medical College, 1868; a member of the American Medical Association; a Confederate veteran; died at his home in Fulton, Mo., March 2, from septicemia, due to an operation wound, aged 63.

J. Norman Davies, M.D. Hahnemann Medical College, Chicago, 1891; a member of the visiting staff of the Warren (Pa.) Emergency Hospital; died suddenly at his home in Warren, February 28, from heart disease, aged 38.

William R. Briscoe, M.D. Dublin, Ireland, 1859; of Arthur City, Texas; a member of the State Medical Association of Texas; a veteran of the Civil War; died at the home of his daughter near Direct, Texas, January 29.

Abram H. Wallace, M.D. Kentucky School of Medicine, Louisville, 1892; a member of the Medical Society of the State of California; died suddenly from heart disease in his office in Los Angeles, March 8, aged 47.

Harrison Allison Winters, M.D. Rush Medical College, Chicago, 1881; of Chattanooga, Tenn.; died at the Erlanger Hospital in that city, March 7, from the effects of a fracture of the femur in June last, aged 55.

Edmund Cantwell Gibbs, M.D. University of Maryland, Baltimore, 1884; a member of the Medical and Chirurgical Faculty of Maryland; died at his home in North Baltimore, March 8, from nephritis, aged 52.

Albert F. Lange, M.D. St. Louis College of Physicians and Surgeons, 1903; who was struck by an automobile, February 24, and seriously injured, died at his home in St. Louis from thrombosis, March 5, aged 34.

Samuel Groome Fisher, M.D. University of Maryland, Baltimore, 1854; for more than 50 years a practitioner of Chestertown, Md.; died at the home of his son in Port Deposit, Md., February 22, aged 77.

George B. Christy, M.D. Western Reserve University, Cleveland, 1859; chief surgeon of the Fifth Army Corps during the Civil War; died at his home in Dunlap, Iowa, February 26, from pneumonia, aged 79.

Benjamin Franklin Laughlin, M.D. University of Maryland, Baltimore, 1904; of Kingwood, W. Va.; died at the home of his father in Deer Park, Md., from paralysis, March 9, aged 31.

William H. Sage, M.D. Yale University, New Haven, 1849; for 30 years a practitioner of New Haven; died from cerebral hemorrhage at his home in Woodbury, Conn., March 10, aged 83.

Charles Miller Dalsen, M.D. Jefferson Medical College, Philadelphia, 1880; of Philadelphia; died at the home of his daughter in that city, March 2, from senile debility, aged 82.

Howard H. Cheyney, M.D. Hahnemann Medical College, Philadelphia, 1875; of Williamsport, Pa.; died in the Hahnemann Hospital, Philadelphia, March 5, from nephritis, aged 54.

George Waters Cleland, M.D. Savannah (Ga.) Medical College, 1854; of Wagoner, Okla.; died at the home of his daughter in that city, January 21, from nephritis, aged 80.

William Edmund Burgar, M.D. College of Physicians and Surgeons, Ont., 1868; died suddenly at his home in Welland, Ont., March 14, from cerebral hemorrhage, aged 68.

Samuel C. Price, M.D. Kansas City (Mo.) Medical College, 1870; of Joplin, Mo.; a veteran of the Civil War; died in Los Angeles, Cal., February 28, aged 69.

Francis V. Schley, M.D. Atlanta (Ga.) Medical College, 1891; city physician of Columbus, Ga., since 1898; died at his home from meningitis, March 14, aged 50.

Olin J. DeLoach, M.D. Atlanta (Ga.) College of Physicians and Surgeons, 1906; of Mascotte, Fla.; died at his old home in Glennville, Ga., March 11, aged 24.

Herman Louis Molter, M.D. Baltimore (Md.) Medical College, 1900; died at his home in North Plymouth, Mass., February 20, from pneumonia, aged 31.

Allen Victor Kelly, M.D. Baltimore (Md.) University, 1892; died at his home in Waterbury, Conn., March 10, from typhoid fever, aged 44.

Robert Ingram Wilson, M.D. New York University, New York City, 1879; died at his home near Swannanoa, N. C., March 8.

Charles Edward Barnhart, M.D. Toronto School of Medicine, 1859; died at his home in Owen Sound, Ont., February 10, aged 76.

L. J. Turner, M.D. University of Georgia, Augusta, 1876; died at his home near Rockdale, Texas, January 30, aged 69.

P. S. Tribbey, M.D. Cincinnati College of Medicine and Surgery, 1871; died at his home in Secor, Ill., March 9, aged 87.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Medical Expert Testimony

The report of the committee on the regulation of the introduction of medical expert testimony, presented at the annual meeting of the New York State Bar Association, has just been received. This committee, of which Hon. A. T. Clearwater of Albany is chairman, and which consists of one member from each judicial district of the state, was instructed to confer with a committee appointed by the Medical Society of the State of New York regarding medical expert testimony. The New York Academy of Medicine and the Homeopathic Medical Society of New York were also invited to participate in the conference through properly appointed committees. A joint meeting of the entire committee was held in New York City and the subject thoroughly discussed.

The committee is of the opinion that, theoretically, an expert is a scientist interested solely in facts, who should retain freedom of judgment and liberty of speech and should be free from the embarrassment of any personal relations to or with the parties to an action. He should speak judicially as the representative of the special branch of science which he invokes and should at all times be treated with respect and have the protection of the court. No one should be permitted to distort, pervert or misrepresent his testimony. He sh have no client to serve and no partisan interests or opin to vindicate.

Not until the expert witness complies with these condi is it possible to rescue expert testimony from the disre into which it has fallen and elevate it to its true posi Scientific open-mindedness is almost impossible where the pert depends entirely for his emolument on the good gra of the contending parties. The commercializing of scient knowledge under the existing conditions lessens its accura and value. The enormous modern development of spe knowledge makes doubt and controversy among experts hi to create it inevitable. The gravest abuses, not to say scandals, have arisen in the introduction of medical expert testimony, until it has come commonly to be believed that such witnesses are so biased that hardly any weight should be given to their opinions. The committee unanimously agreed that the methods now pursued do not subserve the ends of justice, and summarize the existing evils as follows:

1. Want of satisfactory standards of expertness, with the result of inviting the testimony of charlatans.
2. The partisan conflicting and hence unreliable character of the evidence often given by so-called expert witnesses.
3. The prolongation of trials and the consequent increase of expense on account of the number of witnesses.
4. The confusing effect on juries of the contradictory testimony of expert witnesses of apparently equal standing.
5. Lack of scruple on the part of some members of the bar in countenancing the hiring by their clients of unprincipled self-styled experts to support causes by specious and untruthful testimony.
6. An unfortunate tendency on the part of some trial judges to permit incompetent, so-called medical experts to testify to opinions predicated on widely unrelated facts and under oath to express views which are but the speculative vagaries of ill-informed minds.

The committee concludes that the remedy for these evils lies with the bench and bar rather than with resort to restrictive legislation, and recommends that judges require a greater degree of competence on the part of persons claiming to be experts by the simple but effective method of defining to a jury with force and precision the distinction between a witness proved to be thoroughly qualified and one whose claim to speak is predicated principally on the fact that he is paid to do so. The committee holds that the bar is not blameless for the present condition of affairs, as some of its members connive at the hiring of corrupt and incompetent so-called experts and also are responsible for the practice of discrediting the testimony of the witness by disconcerting him in cross-examination. The committee presented the bill which it had framed for presentation to the legislature and asked for the adoption of a resolution approving of the bill and urging its passage.

The bill referred to provides that within ninety days after the passage of the act that justices of the Supreme Court of the state shall designate not less than ten nor more than sixty physicians in each judicial district, who may be called as medical expert witnesses by the trial court or by any party to a civil or criminal action in any courts of the state, and who shall when so called, testify and be subject to full examination and cross-examination as are other witnesses. This act is not intended to limit the right of parties to call other expert witnesses as heretofore, but establishes a corps of recognized experts in each judicial district, who have the stamp of approval of the court, and who may be called by the trial judge to testify regarding scientific matters.

The investigations of the committee showed that only two states, Michigan and Rhode Island, have any statutory provisions regulating expert testimony. A bill has this year been introduced into the Maine legislature, mention of which has already been made in The Journal. It is gratifying to note this evidence of interest in this important subject, and it is to be hoped that cooperation between medical and legal organizations may be secured in other states and that the solution of this important but perplexing problem may be worked out.

The Future of Osteopathy

A summary of the bills now before the Massachusetts legislature of interest to physicians appears in the *Boston Medical and Surgical Journal*, March 11. Most of the measures commented on have already been mentioned in The Journal. One bill not yet mentioned is House Bill 1340, which relates to the granting of degrees by the Massachusetts College of Osteopathy. It provides that this institution shall be empowered to grant the degree of doctor of medicine to its graduates.

To those who have followed the history and development of osteopathy in the past ten years, this is exceedingly significant. At the time that the osteopathic advocates first appeared before state legislatures asking for legal recognition of their cult and the establishment of state boards of examiners for their followers, it was insisted on by members of the medical profession, interested in maintaining a high standard of medical education that this new movement, like all sectarian movements, was merely an effort to introduce a cheaper and less scientifically educated class of physicians and that, in reality, it was merely a "back door" to the medical profession, admitting persons to the duties, responsibilities and privileges of physicians who had not complied with the existing standards of qualification. This was indignantly denied by the osteopathic advocates, who declared that osteopathy was not a practice of medicine, that it was something entirely different and that it was not and never would become a "school" of medicine. The fields of obstetrics, surgery, both major and minor, contagious diseases, issuing of birth and death certificates, and even in some cases, the appointment of quarantine and health officers, all, so far as possible, have been invaded by these people who have nevertheless insisted constantly that "osteopathy and the practice of medicine are two separate and distinct things." The introduction of courses in surgery, the attempts at instruction in asepsis and antisepsis and bacteriology in the "progressive" osteopathic schools are but tacit acknowledgments of the objects more clearly avowed by the Massachusetts College of Osteopathy.

We venture the assertion that if this sect is still in existence at the end of ten years, the schools of instruction maintained by its adherents will all have become "schools" of medicine, conferring the degree of doctor of medicine and constituting another group of poorly equipped schools with low standards of admission and instruction, analogous to the lower grade medical colleges of the present day and constituting additional material for the reputable and progressive portion of the medical profession to digest and assimilate slowly at the cost of great labor and with the lowering of the general standards of the profession.

The effort of the Massachusetts College of Osteopathy to gain such a right should be noted in all of the states in which osteopathic legislation is being urged as an evidence of the manifest tendency of this sect and the speciousness of its arguments and claims.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR.
Bowling Green, Kentucky.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course]

Eighth Month—Fourth Weekly Meeting

COMBINED SYSTEM DISEASES

Ataxic Paraplegia.—Pathology: Changes in dorsal and lateral columns. Arterial changes. Symptoms: Sensory symptoms, gait, reflexes, muscular rigidity, incoördination.

Primary Combined Sclerosis (Putnam).—Changes in cord. Age, sex, association with anemia. Symptoms.

Hereditary (Friedrich's) Ataxia.—Symptoms. Characteristic gait, ataxia of arms, static ataxia. Reflexes, sensory symptoms, nystagmus. Deformities. Speech.

DISEASES OF THE NERVES

Neuritis.—1. Localized.—Etiology: Cold, trauma, occupation palsies, pressure from tumors, etc. Symptoms: Pain; location, character, distribution. Local manifestations. Motor disturbances. Migratory neuritis. Electrical reactions. Prognosis.

2. Multiple.—Etiology: Infectious diseases, organic poisons, in cachexia of anemia, cancer, etc., beri-beri. Pathology: (a) Interstitial, (b) parenchymatous neuritis. Symptoms: (a) Acute Febrile Polyneuritis. Onset, clinical history, sensory and motor disturbances. Course, differentiation. Recurring polyneuritis. (b) Alcoholic Neuritis. Onset, clinical course, sensory and motor manifestations, mental symptoms. Prognosis. (c) Multiple Neuritis in Infectious Diseases. Diphtheria, tuberculosis, typhoid, scarlatina, etc. Course and prognosis. (d) Neuritis from Metallic Poisons. Arsenic from medicinal use, food and drink. Lead, mercury and zinc. (e) Beri-beri. Distribution. Theories of causation.

DISEASES OF SPINAL NERVES

Cervical Plexus.—1. Occipito-Cervical Neuralgia. Etiology. Nerves involved. Symptoms.

2. Phrenic Nerve. (a) Paralysis: Etiology; lesions of cord, compression, neuritis, diphtheria, lead, etc. Symptoms. (b) Hiccough: Etiologic classification (Symes), inflammatory, irritative, specific, neurotic; causes of each.

Brachial Plexus.—1. Combined Paralysis. Etiology: compression, trauma, fractures, dislocations, neuritis, "obstetrical palsy."

2. Individual Nerves. (a) Long thoracic, (b) circumflex, (c) musculo-spiral, radial, (d) ulnar, (e) median; etiology and symptoms of each.

Lumbar Plexus.—(a) Obturator, (b) anterior crural, (c) gluteal, (d) external cutaneous, "meralgia paresthetica."

Sacral Plexus.—Pelvic inflammation or tumors, parturition, neuritis. Paralysis of (a) sciatic, (b) small sciatic, (c) external popliteal, (d) internal popliteal. Sciatica: Etiology; age, sex, rheumatism, injury, compression, spinal arthritis. Treatment. Mechanical, constitutional, rest and fixation; local treatment.

Monthly Meeting

The Topical Diagnosis of Lesions of the Cord.
Early Diagnosis and Treatment of Locomotor Ataxia.
Etiology and Symptomatology of Acute Anterior Poliomyelitis.

Miscellany

A Newspaper's Views of the Antivivisectionists

The following is from the *North American*, Philadelphia, Feb. 8, 1909:

“All history, we believe, bears out our belief that most of the deadly errors, the suffering and the calamities of the world have been caused less by malice and conscious criminality than by well-meaning ignorance. Within the past week Philadelphia has seen an instance of that type of ignorance which is an infectious disease, curable only by copious and repeated doses of truth, administered before the ailment has progressed into the acute stages of hysteria and fanaticism.

“Ordinarily the *North American* would not feel called on to discuss seriously the utterances of a young woman who adopts as the premises for her public arguments flat, dogmatic denials of the incontestably proved truths of science and the vital statistics of all civilized nations.

“But our legislative records prove only too plainly that the doctrine of which the attractive and plausible young woman from Sweden is a high priestess has found too many adherents for the safety of the community.

“Only the veto of the governor prevented this state from taking a long step back toward the dark ages by the passage of acts weakening the vaccination law and forbidding animal experimentation. And in the present session of the legislature there already is proof, in the harmful Article XV of the proposed public school law, that there is deliberate and organized purpose to force through legislation that will menace life and health and obstruct the progress of all preventive medicine.

“Concerning the various horrors of the torture of helpless animals in laboratories, which Miss Lind-af-Hageby details › her shuddering audiences, we can say only that in the exustive investigations of the Royal Commission on Vivisecon in Great Britain there was utter failure to substantiate similar charges. And in the most noted case that has reached the courts, the defendant, who had quoted from an antivivisection book, was condemned to pay $10.000 damages and heavy costs, while the publisher withdrew the book from sale and made public apology to the libeled scientists.

“Incidentally, the author of that book was Miss Lind-af-Hageby.

“But it is easy to make arbitrary assertions and by dealing in generalities convey the impression that inhumane practices are prevalent. For most people do not know that there are only some forty laboratories in Germany, twenty in France, twenty in England, twenty in Italy and fifty in all other countries in which experiments on animals are made. An exceedingly large supposition would be the sacrifice of five victims a day in each of those 150 institutions

“Considering the fact that at least two thousand million mammals die every year—in this country alone we slay and eat 50,000,000 beeves, sheep and hogs and 250,000,000 fowls annually—the number used for experimentation hardly seems to deserve the antivivisectionists' favorite term, ‘holocaust.’

“Let it be remembered also that under the carefully enforced British act of Parliament it was shown last year that of 73,000 operations on animals, 96.5 per cent. were inoculations or hypodermic injections of a wholly painless character, while the remaining 3.5 per cent. were effectively anesthetized, according to the sworn testimony of the government inspectors.

Yo
“Such facts do not, however, apply to the theories of Miss Marclf-Hageby, which we may summarize thus, in her own

Charles
1859; died that the torturing of a thousand dogs could never
aged 76. th, of a single child.
eve any benefit whatever can come to human beings
L. J. Turner, ts made on animals.
died at his home rtely, that all inoculation of children or grown
btained from the diseased blood of animals is
P. S. Tribbey, M.D. a large number of cases the serum intro-
gery, 1871; died at hi blood is worse in its effect than the disease
re.

“ ‘I do not believe that there has been any decrease in deaths from diphtheria since the introduction of the antitoxin.

“ ‘Animal experimentation is wrong for two reasons: First, it is wrong to assume that man can in any way benefit by experiments made on animals

“ ‘In the second place, it is *wrong because* it is possible to arrive at just as conclusive results through chemical experimentation as through vivisection.’

“Now, apart from all recent discoveries in bacteriology, it is beyond dispute that all we know of the circulation of the blood, the processes of digestion, the growth of bone and the motor centers of the brain are due directly to experiments on animals.

“It was vivisection of what we may be asked to consider a ‘sub-human’—a tadpole, to be exact—that led to our modern effective methods of combating most forms of blood-poisoning.

“It was vivisection and inoculation of animals that led to the discovery of tuberculin; of the serums, vaccines and antitoxins for lockjaw, rabies, cholera, plague, typhoid, cerebrospinal meningitis, diphtheria. It was vivisection and animal experiment that aided in the discovery of antiseptics and anesthetics—the entire basis of modern surgery.

“Surely none need be told that tuberculosis is not the hopeless curse it was. Were it not for animal experimentation the prospects of ultimately lifting this great burden of suffering and death from the human race would be as dark as it was before Klencke, in 1843, and Villemin, in 1865, succeeded in proving its infectious nature by experiments on animals with tuberculous material, and thus paved the way for Koch's discovery, in 1882, of the tubercle bacillus. The many researches which have flowed from the study of this germ have taught us already how to protect the healthy from infection, and are daily teaching us how we may restore to health those already infected.

“Concerning the calm assertion that no good has come of the diphtheria antitoxin, we have at hand indisputable statistics showing that in one country alone—France—the lives of 1,350,000 children have been saved in fifteen years.

“In the words of Dr. Charles Richet, ‘this would be sufficient to justify the death of the twenty-five dogs and the 100 rabbits which I sacrificed, and of the 200 horses which Behring and Roux used for the preparation of the antidiphtheria serum.’

“A little sense of proportion is an excellent thing. A hundred weeping mothers; a hundred children gasping vainly for breath, the hope of a hundred mourning homes dead in the cradle—are we to count these nothing beside a rabbit which has had to receive a little blood of a dog into its abdomen?

“By animal experimentation yellow fever and the plague have been practically conquered. Meningitis is losing its terrors. We know how to prevent typhoid, and hope is strong that *a cure for cancer may* yet be discovered by the research that alone can make that possible.

“Our wish is to refrain from anything resembling the *violence with which the antivivisectionists preach* their beliefs. Yet it is difficult to refrain from impatience when we read in one of their official publications this summary of the lifework of one of the greatest benefactors of the human race:

“ ‘Pasteur and his followers increased a very rare disease called rabies and are making fortunes out of the antirabic virus.’

“Read that *and then remember* that before Pasteur's day the mortality rate in the maternity hospitals of Europe of puerperal fever was 40 per cent. Remember that it was Pasteur who reduced that rate to the present one of 0.02. And then remember that there are women who now sneer at him who did more than any other to lighten ‘the curse of Eve.’

“Condemnation of Pasteur coming from a woman's mouth is an example of such ingratitude that we say without reservation that the woman who assails his services to humanity must be motherless, childless, ignorant or bad.

“We do not for a moment question the sincerity of the young woman we have quoted nor that of her sympathizers. We share their abhorrence of anything savoring of needless cruelty. We do question the accuracy of their knowledge, and consider them lacking utterly in sense of proportion and the true mercy that lies in sane humanitarianism.

"We deny absolutely their contention that animal experimentation has accomplished no good, unless, in truth, 'Life and Death and Motherhood be naught.'

"And to all we commend this thought of President Eliot of Harvard: 'Let me call your attention also to the fact that the humanity which would prevent human suffering is a deeper and truer humanity than the humanity which would save pain or death to animals.'"

Cook Rescue Expedition.—An effort is being made to raise the necessary sum of $35,000 or $40,000 to fit out an expedition for the relief and rescue of the well-known arctic explorer, Dr. Frederick Cook. Dr. Cook is a graduate of the College of Physicians and Surgeons of New York. He was a member of the Peary expedition in 1902, of the Belgian antarctic expedition, 1897-99, and the organizer and leader of the subarctic Alaska expeditions of 1903-06. He is well-known to the public as the author of books on arctic travel and as a contributor to the magazines on polar exploration, and has received many official honors. He started out in May, 1907, with the view of reaching the highest northern point possible during the long period of darkness, so that by the coming on of twilight he would be in the best possible position to reach and circumnavigate, the north pole successfully. In the last letter received, dated March 17, 1908, he was forty miles above Cape Thomas Hubbard, Jr., the highest point of land on the north polar sea. He was well supplied and equipped and expressed himself as confident that he would succeed in reaching the north pole and returning to Etah, in Greenland, by September, 1908. His friends are satisfied that he has accomplished much valuable work and that his records will be important to the United States for all time to come. It is, however, six months since the time at which he should have been back at the base of his supplies, and it is feared that he may be in trouble. Hence it is proposed to fit out a rescue party with an equipment and provisions for a two years' stay, to consist only of such men as are willing to remain until either Dr. Cook and his records are rescued, or his fate is established. The expedition will be under the command of Mr. Dillon Wallace, who has had considerable arctic experience in the Leonidas Hubbard, Jr., Labrador expedition of 1903, and other expeditions. Mr. Wallace will land at Etah, and if no traces of Dr. Cook are found, will push northward on his intended course in search of him. Dr. Cook has a wife and two little girls now living in Brooklyn, and was, prior to his undertaking exploration work, a medical practitioner of good standing and acknowledged ability. A central committee appointed jointly by the Explorers' Club and the Arctic Club of America (of which Rear Admiral Schley is president) is responsible for the getting up of the expedition. Contributions should be sent direct to F. S. Dellenbaugh, secretary Cook Relief and Rescue Expedition, 224 West Fifty-second Street, New York City.

Cells with Basophile Granules in the Blood and Connective Tissue.—According to F. Weidenreich (*Folia haematol*, 1908, V, No. 3), those cells with basophile granules occurring in the blood and termed mast-leucocytes are not the same as the mast-cells of the tissues. The latter are also to be distinguished from the clasmatocytes of Ranvier, as well as from the wandering cells of Maximow. The mast-leucocytes of the human being are degenerating large mononuclear leucocytes. The clasmatocytes and round wandering cells are emigrating lymphocytes and motile fibroblasts, which have acquired a high phagocytic power.

Eclampsia.—J. E. Welch, in the *American Journal of Obstetrics and Diseases of Children*, states that the perplexing aspect of the subject of eclampsia is the fact that under apparently similar conditions one individual will have eclampsia while another will not. This may be explained, he says, by the side chain theory of immunity; in one instance, enough side chains are formed to neutralize the poison, while in another this capacity is exhausted and the cell is destroyed.

Medicolegal

Physical Examination, Competency of Witness and Prior Disease

The Supreme Court of Florida, Division A, says, in Atlantic Coast Line Railroad Co. vs. Dees, a personal injury case brought by the latter party, that it seems never to have construed the statute enacted in 1899, and now known as Section 3151 of the General Statutes of Florida of 1906, which provides that: "In all actions brought in the courts of this state to recover damages for personal injuries alleged to have been sustained, it shall be discretionary with the trial court, on motion of the defendant, to require the injured party, if living, either before or at the time of the trial of the cause, to submit to such physical examination of his or her person as shall be reasonably sufficient to determine physical condition at the time of trial and the nature and extent of the alleged injuries. The physical examination provided shall be made by a physician to be named by the court in the presence of one or more physicians or attendants of the injured party, if the party so desires. The compensation of the examining physician shall be fixed by the court in each particular case, and shall be in the first instance paid by the party petitioning for such examination but shall be taxed up as a part of the costs of the case subject to the final disposition of the same." The court now holds that this section makes it discretionary with the trial court to require such examination, and an order of such court denying the motion or application of the defendant for such physical examination will not be disturbed by an appellate court unless an abuse of discretion is clearly made to appear.

The court also holds that where a witness, who has been introduced on behalf of the plaintiff in an action brought to recover damages for personal injuries alleged to have been caused by the negligence of the defendant, has testified that he is a physician engaged in general practice, has resided in a certain designated town in the state for four years, and that the plaintiff has been his patient for some months past, a proper and sufficient foundation has been laid to warrant the witness being permitted to testify as to what symptoms he found when he was first called to see such patient.

When a witness is offered either as an expert or a skilled witness, it is for the trial court to determine whether or not the witness has been shown to possess the requisite qualifications and special knowledge to warrant his so testifying, and the decision of such trial court is conclusive on this point unless it appears from the transcript to have been erroneous or to have been founded on some error in law.

In an action brought by a passenger against a railroad company to recover damages for personal injuries alleged to have been caused by the negligence of the defendant, and such passenger was at the time the injuries were received suffering from some disease or illness which tends to aggravate the injuries, such previous infirmity will not excuse the carrier from damages to the full extent of all injuries caused by such negligence, and the fact that such carrier was not informed of the passenger's condition will make no difference.

Duty of Parents to Care for Adult Children Rendered Helpless by Accident or Disease.

The Court of Appeals of Kentucky says in the case of Crain vs. Mallone, that the duty and obligation of a parent to care for his offspring does not necessarily terminate when the child arrives at age or becomes an adult; nor is it limited to infants and children of tender years. An adult child may from accident or disease be as helpless and incapable of making his support as an infant, and the court sees no difference in principle between the duty imposed on the parent to support the infant and the obligation to care for the adult, who is equally, if not more, dependent on the parent. In either case the natural, as well as the legal obligation is the same, if the parent is financially able to furnish the necessary assistance. If the parent has no estate, or is indigent or otherwise unable to support his infant child, who is possessed with ample means, the chancellor when appealed

quency of renal complications in eczema. It shows that the kidneys are not, as a rule, affected in the diseases of nutrition, although in scurvy and severe anemia the urine may show the evidences of the hemorrhagic tendency characteristic of these diseases. It also shows that affections of the kidneys secondary to other diseases in infancy do not usually produce edema, and conversely that edema in infancy is usually due to some other cause than disease of the kidneys.

The study of these cases seems to justify the conclusions that the presence of albumin and casts in the urine in the acute diseases of infancy is the manifestation of an unusual degree of toxemia and is, to a slight extent, of bad prognostic import. However, many infants showing albuminuria and casts recovered and many others in whom the urine was normal did not. There was nothing about these cases to show that the renal condition had any direct influence on the fatal outcome; it was merely an index of the toxemia. So few pathologic examinations were made that no statement is justified as to the pathologic changes in the kidneys. It seems fair to assume from the changes in the urine, however, that in the vast majority of cases the pathologic condition did not go beyond an acute degenerative nephritis and that a definite parenchymatous or interstitial nephritis was very uncommon. It seems evident that febrile albuminuria and acute degenerative nephritis occur in the same conditions and at least as frequently in infancy as in childhood and adult life.

9. **Radical Cure of Hernia.**—Kivlin describes an operation for the radical cure of indirect inguinal hernia, differing from the Bassini operation in that Kivlin closes the opening of the internal ring, and does not transplant the cord; and from Coley's operation in that he closes the ring and Coley does not. Kivlin claims for his method a stronger support of the weakest point in the whole canal.

Medical Record, New York

March 13

14 *Principles and Technic of the Wassermann Reaction and Its Modifications. H. Fox, New York.
15 *Non-Gastric Malignant Disease and Secretion of Gastric Juice. L. A. Levison, Toledo, O.
16 The Problem of Epilepsy. R. H. Porter, Chicago.
17 *Acute Postoperative Jaundice. C. G. Cumston, Boston.
18 *Egg Poisoning. D. J. M. Miller, Atlantic City, N. J.

14. **The Wassermann Reaction.**—Fox illustrates the principle of the fixation of the complement by an ingenious diagram, suggested by Dr. Wood MacMurtry, of a swinging pendulum. The pendulum representing the complement swings to one side and completes the bacteriolytic system, or to the other side and completes the hemolytic system. In the first case, antibody being present, the complement is fixed in the bacteriolytic system, and consequently no hemolysis occurs; but when antibody is absent, the complement attaches to the hemolytic system and hemolysis occurs. Fox describes in detail the substances used in performing the Wassermann reaction, the steps necessary to prepare them, and the technic of the operation. He discusses the sources of inaccuracy, and in four tables illustrates the result of the reaction, respectively, in 46 cases of clinically positive syphilis, 21 cases of undoubted syphilis, a small series of dermatologic cases in which syphilis could be excluded, and a series of cases in which the diagnosis was in doubt.

15. **Free Hydrochloric Acid in Malignant Disease.**—Levison concludes that free hydrochloric acid is diminished, not only in gastric carcinoma, but in local carcinoma also, in fact, in all cancers.

17. **Postoperative Jaundice.**—Cumston says that the existence of acute postoperative jaundice can not be denied merely from the fact that few cases are encountered. It is probably due to several causes. The serious form of acute postoperative jaundice is almost always due to the toxic action of the anesthetic, particularly chloroform, which attacks the hepatic cells, whose normal condition is below par, so that the surgeon should avoid interference, save in extreme emergency, when the liver gives evidence of disease. Occasionally there may be a spasm of the biliary tract produced by manipulation of the parietal peritoneum, while in other cases it is due to an emotional reflex.

18. **Egg Poisoning.**—Miller reports a case of egg poisoning in a girl of 11, and discusses the condition. He thinks the conclusion is warranted that the majority of instances of egg poisoning are really cases of so-called ptomain poisoning; i. e., that they are due to toxic substances developed in apparently fresh eggs by the processes of digestion, or to unrecognized changes—unrecognizable, that is, to the ordinary senses—in the eggs themselves. He suggests that as the symptoms of ptomain poisoning are in many cases strikingly similar to those produced by muscarin (the active principle of the poisonous mushroom), to which atropin is a perfectly physiologic antidote, the latter drug may be found useful in severe forms of egg poisoning.

Lancet-Clinic, Cincinnati

March 13

19 *Nervous Children. I. A. Abt, Chicago.
20 *Differentiation of Oft-Recurring Gastric From Gallstone and Other Visceral Pain and Distress. N. Rosewater, Cleveland, O
21 Vibrotherapy. F. L. Davis, Evansville, Ind.

19. **The Nervous Child.**—Abt discusses the causes of nervousness in children (of which heredity and predisposition are important factors), the acquired causes, the child's pleasures and amusements, troubles and griefs, in regard to which last he particularly condemns the habit of asking suggestive questions after an accident. He urges regularity of habits, discusses the effect of training, describes the forms of nervousness in children, and points out that it is necessary to manage not only the child, but also the parents and sometimes the grandparents.

20. Abstracted in THE JOURNAL, Nov. 21, 1908, p. 1805.

Medical Fortnightly, St. Louis

March 10

22 Touring the Lands Where Medical Science Evolved, Medieval and Renaissant. R. G. Eccles, Brooklyn.
23 Deep Alcohol Injections in Facial Neuralgia. B. L. Hale, Cherryville, Kan.

Northwestern Lancet, Minneapolis

March 1

24 *A Clinic on Insanity. D. R. Brower, Chicago.
25 Angiomata of the Face and Sinuses—Report of a Case of Angioma of the Antrum of Highmore. E. F. Reamer, Mitchell, S. D.
26 Sporadic Trichiniasis. G. D. Head, Minneapolis.
27 Clinical Demonstration of Three Cases After Perineal Prostatectomy. H Bouman, Minneapolis.
28 Hydronephrosis in a Child 18 Months Old. M. K. Knauff, Two Harbors, Minn.
29 Cardiospasm. O. R. Bryant, Minneapolis.

24. **Insanity.**—Brower insists on the extreme difficulty of giving a definition of insanity that can not be severely criticized, but a definition, even if it can be criticized, is an advantage. He suggests that "insanity is a more or less permanent disease or derangement of the brain, producing disordered action of the mind in such a way as to put the subject in a condition varying from his normal self and out of relation with his environment." He refers to pathologic specimens of kidney, liver, spleen and heart from the insane, illustrating the fact that insanity is a disease of the brain in a certain number of cases brought about by disease of the various organs of the body that are concerned in blood making, blood purification and blood distribution. The brain receives more blood than any organ of the body not concerned in the business of blood making, and the quality of it is of the utmost importance. He refers to the great increase in the number of cases of insanity in the present day, and says that a perfect classification of insanity has not yet been made, because no classification can be perfect unless it is based on pathology. He divides insanities, however, into first, those that are acquired—that is, the insanities that occur in brains that are normal in structure and that have been functionating properly; second, the cases that are due to a degenerative process in the brain—brains that were never quite built up on the standard lines; we call these degenerative psychoses; third, another class, in which he places the insanities of the critical periods of life, developmental and involuntary; fourth, a class in which belong the borderline cases, the obsessions and the phobias, the impulses and the sexual perversions; and, finally, a fifth class, the terminal dementias, a condition toward which all the others are traveling. He then

discusses cases of melancholia, mania, confusional insanity and paretic dementia. Cases of paresis are becoming much more frequent, the factors producing them being syphilis, alcohol and stress; the type, however, is changing. In Brower's earlier experience with general paralysis the cases were all of the grand delusion type, but now some are melancholic, others being of the simple dementia type. Further, he thinks that some of these patients improve, and once in a long while cases seem to reach a symptomatic cure through a long space of time. As to its causation, he refers to his investigations in the Hawaiian Islands, in Cairo and at Tokio some years ago, when he was unable to find a single case of the disease, and at present, though syphilis is now more generally prevalent in those countries than in America, the disease is still practically unknown, so that there must be some *other factor added to syphilis in its production*, and this factor he believes to be alcohol. Early recognition of general paresis with vigorous antisyphilitic treatment, tonics of the *phosphorus class, and complete rest*, will sometimes produce improvement.

Journal of Medical Research, Boston

February

30 *Effect of Dilution on the Flocculation of Colloids.* B. H. Buxton and A. H. Rahe, New York.
31 *Enterokinase in Infancy. A. E. Austin, Boston.
32 *Physiology and Chemistry of the Parathyroid Gland. W. N. Berkeley and S. P. Beebe, New York.
33 *A Transmissible Cancer of the Rat Considered from the Standpoint of Immunity. F. P. Gay.

31. **Enterokinase in Infants.**—Austin finds that kinase, like that present in the natural intestinal secretion, can be isolated *from the intestines of some, but not all, infants, from* 24 days of age on.

32. **The Parathyroid Gland.**—Berkeley and Beebe say that the nucleoproteid of the parathyroid relieves the symptoms of acute tetany in dogs, but the globulin has no such power. Boiling or heating the nucleoproteid solution to 80 C. for half an hour destroys its activity, and it deteriorates rapidly when kept in solution or frozen. The nucleoproteid relieves tetany by the mouth, but more effectively when given subcutaneously or intraperitoneally. Tetany is regarded as due to a metabolic poisoning accompanied by a large increase in the secretion of ammonia, and the authors are inclined to believe that the parathyroids are chiefly concerned in furnishing enzymes of prime importance in the intermediary metabolism of nitrogen.

33. **Transmissible Rat Cancer.**—Perhaps the most striking of Gay's results is that during the premetastatic period after tumor implantation there was evidence of active defense on the part of the animal, indicated by the presence of antibodies, and during *this period reimplantation seemed still further to* increase the resistance, so that the original tumor was destroyed; but when this period was passed, metastases occurred and the *second tumor grafts grew*. The presence of antibodies was demonstrated by means of complement fixation in mixtures of cancer extracts and the serum of rats. As stated, complement *fixation was obtained during* the premetastatic period, but never during the metastatic period.

American Journal of Physiology, Boston

February

34 *Acapnia and Shock:—II A *Principle Underlying the Normal Variations in the Volume of the Blood Stream*, and the Deviation from this *Principle in Shock*. Y. Henderson, New Haven, Conn.
35 *Influence of *Sodium Chlorid and Calcium Chlorid* in Potassium Contraction. W. D. Zoethout, Champaign, Ill.

34. **Acapnia and Shock.**—Henderson concludes that the chief element regulating *the volume of* the arterial blood stream is the distensibility of the ventricle during diastole, and the volume of blood ejected by the ventricle varies with the pulse rate in such a way *that the minute volume* of the ventricular output is nearly constant at pulse rates above 60. Deviations from these maxima are caused by insufficient venous supply to the right heart. Failure of the circulation in shock is due primarily to abolition of venous, not arterial, tonus. Stimulation of the vagus and accelerator nerves does not induce the heart to deviate from this "uniformity of behavior." The pulse pressure, which is now generally taken as giving a measure of the heart's action, is *not a reliable* index of the systolic discharge.

35. **Influence of Sodium and Calcium Chlorid in the Potassium Contraction.**—*Zoethout concludes* as follows:

1. The amount of sodium in the muscle is sufficient to counteract the stimulating effect of a small quantity of potassium salt. The removal of this sodium by immersion in a 6 per cent. cane-sugar solution renders *the muscles more irritable* toward potassium.
2. The same *is most likely* true for the calcium.
3. Both sodium and calcium favor the relaxation of a muscle in potassium contraction.
4. Ringer solution and a 0.7 per cent. sodium-chlorid solution very speedily reduce the irritability of a muscle toward potassium. *These* solutions can, therefore, not be looked on as inert fluids, even though they preserve the irritability of a muscle toward electrical *stimulation for a long time*.

New Orleans Medical and Surgical Journal

February

36 Case of Pectoral Heart with Malformations and Partial Transposition of Its Vessel Trunks; and a Case of Fibrinous Tracheobronchopneumonia Due to the Pneumococcus. M. Couret, New Orleans.
37 *Tumors of Penis and Testes*, with Special Reference to Malignancy, and a Statistical Survey of Cancer in the Charity Hospital. *J. Lazard, New Orleans.*
38 Tumors of the Female Pelvis. L. Perilliat, New Orleans.
39 Tumors. O. L. Pothier, New Orleans.
40 Antidiphtheritic Serum Medication in Postdiphtheritic Paralysis. H. Dupuy, New Orleans.
41 Surgical Importance of the Intestinal Lesions of Typhoid. A. L. Wilson, Alexandria, La.
42 Carcinoma *of Liver: Operation: No Return. J. B. Hargrove,* Natchitoches, La.

California State Journal of Medicine, San Francisco

February

43 *Utilization of Social Waste Products. W. A. Briggs, Sacramento.
44 What is a Practical Examination in Anatomy? D. L. Tasker, Los Angeles.
45 Treatment of Tuberculosis with Intravenous Injections of *Tuberculin and Atoxyl. M. Rothschild, San Francisco.*
46 *The Itch. D. W. Montgomery, San Francisco.
47 True Intestinal Dyspepsia. N. W. Jones, Portland, Ore.
48 Treatment of Malignant Growths by High-Frequency Spark. D. Friedlander, San Francisco.
49 Suicide and Alcohol. A. W. Hoisholt, Stockton.
50 Primary Pneumococcus Peritonitis. L. S. Mace, San Francisco.
51 Early Recognition of Pulmonary Tuberculosis. G. H. Evans, San Francisco.
52 Direct Transfusion of Blood. W. I. Terry, San Francisco.
53 Treatment of Pneumonia. G. R. Carson, San Francisco.

43. ***Utilization of Social Waste Products.***—Briggs points to the utilization of by-products which were formerly mostly, if not wholly, waste—e. g., coal tar and "those by-products of industry which emit noxious vapors and poison the neighborhood—as among the chief factors in modern industrial progress." By analogy he suggests that the waste products *of civilization in like manner should* be utilized as factors in social progress. Take, for instance, the opposing views of Koch and von Behring as to the bovine origin or otherwise of human tuberculosis, he says; the solution of this question requires experimentation on human beings and he insists that such experimentation can be made to conform to the dictates of an enlightened conscience, public as well as medical, by dedicating to science and humanity the lives of those forfeited to the law. He refers to a bill now in preparation for presentation to the legislature of California, authorizing the use of such capital convicts, as in consideration of commutation of sentence to life imprisonment *shall voluntarily* submit to such experimentations. He discusses the objections to the proposed bill as follows: It would not be a cruel and unusual punishment because it is not *intended as a punishment* at all. It would not necessarily be physically painful, and certainly not physically cruel, and, as an alternative *to hanging*, the convict himself would be the best judge as to whether it would be mentally cruel. Its results would often be negative, and even when otherwise would be less cruel *than death* on the scaffold. The *commutation, postponement* of sentence and pardon, as constitutional prerogatives of the governor, would not be interfered with, since the convict voluntarily petitions *the governor for the privilege* of experimentation. As to such a course diminishing the terrors of the law, since the discretionary power exists with the jury of imposing either life *imprisonment or the death* penalty in convictions for murder in the first degree, he asks in what way the ter-

rors of the law would be diminished if the governor, instead of the jury, should exercise this discretionary power. On the other hand, he asserts that such a course would tend to diminish the difficulties of the trial by jury: would open the door to further and more serious and systematic study of the criminal classes—their genesis, pathology, psychology, prevention and treatment; and would inevitably lead to valuable discoveries in physiology, pathology, bacteriology and therapeutics.

46. This article will be abstracted in the Department of Therapeutics.

Journal of the Medical Society of New Jersey, Orange

February

54 The Drink Habit and Its Treatment. C. A. Rossenwasser, Newark.
55 Acute Perforating Gastric and Duodenal Ulcer (concluded). E. Eliot, New York.
56 Differential Diagnosis of Tumors of the Breast. E. J. Ill, Newark.
57 *Acute Chorea. C. H. Scribner, Paterson.
58 Pediatric Don'ts. K. H. Goldstone, Jersey City.
59 Necessity for Schools of Instruction for Public Health Officers. J. L. Leal, Paterson.

57. This article will be abstracted in the Department of Therapeutics.

Southern Medical Journal, Nashville, Tenn.

February

60 *Question of the Necessity of a Second Operation for Removal of Appendix in Cases in Which an Appendiceal Abscess Has Been Treated by Simple Incision and Drainage. S. McGuire, Richmond, Va.
61 Tuberculosis of the Stomach, Liver, Gall Bladder, and Pancreas. L. W. Hotchkiss, New York.
62 Renal Calculi. D. N. Eisendrath, Chicago
63 Tumors of the Bladder. A. L. Fowler, Atlanta, Ga.
64 Problem of Relapse After Apparent Cure in Treatment of Pulmonary Tuberculosis. C. L. Minor, Asheville, N. C.
65 *Conclusions Based on Observations of Five Hundred Cases of Fractured Skull. W. C. Kirchner, St. Louis.
66 Case of Ileus Caused by Unique Enterolith. C. H. Cargile, Bentonville, Ark.

60. **Second Operation for Appendicitis.**—McGuire discusses the question as to the necessity of a second operation for the removal of the appendix, in cases in which an appendicular abscess has been treated by simple incision and drainage. He publishes replies from a number of prominent surgeons to a question as to their practice in the matter, and also the reports in the case of twenty-three patients in which his own practice of not performing such an operation was followed. An analysis of the cases shows that all the patients are living and in good general health from 1 to 5 years after operation. In 2 there had been attacks of colicky pains, in 2 slight hernia, and 2 suffered with digestive disturbances. The result of his study is that while a surgeon may be justified in advising a secondary operation in all cases, as theoretically the safest plan to follow, he is not justified in persuading, urging or starving a patient until he consents to have it done. The appendix should always be removed at the first operation if the abscess is small and not adherent to the abdominal wall beneath the incision. It should be left only in neglected cases, in which the abscess is large and attached to the parietal peritoneum. When this condition exists the appendix is usually gangrenous, undergoes liquefaction, and is eliminated with the discharges. In such cases suppuration continues, as a rule, for several weeks, and before a secondary operation could safely be done the patient is homesick, weakened physically by confinement, and depleted financially by the expenses incident to his stay in the hospital. Experience seems to show that if subsequent trouble develops the infection is not usually acute, and pus, if it is formed, is walled in by old adhesions. Therefore, McGuire thinks that the surgeon does his duty if he makes it clear to the patient that owing to the complications which existed it was not found safe to remove the appendix, and tells him that while a second operation is advisable, it is not imperative unless he has tenderness over the incision, colicky pains in the bowels, or persistent digestive disturbances, in any of which instances it is distinctly necessary for him promptly to seek surgical assistance.

65. Abstracted in THE JOURNAL, Jan. 2, 1909, p. 67

Journal of Ophthalmology and Oto-Laryngology, Chicago

February

67 Trachoma. D. T. Atkinson, Dallas, Texas.
68 Two Cases of Serpiginous Ulcer Following Removal of Foreign Body from the Cornea by Factory Foremen. A. T. Wanamaker, Chicago.
69 Anatomic Relationship Between the Accessory Nasal Sinuses and the Orbit. N. H. Pierce, Chicago.
70 Use of Brometone in Chronic Affections of the Middle Ear. W. S. Stanley, Milwaukee.

Old Dominion Journal of Medicine and Surgery, Richmond

February

71 Hippocrates and His Times. I. S. Stone, Washington, D. C.
72 History, Etiology, Symptoms and Treatment of Amebic Abscess. G. B. Cook, Richmond, Va.
73 Diagnosis of Hysteria. B. R. Tucker, Richmond, Va.
74 Treatment of Toxemia of Pregnancy. D. J. Coleman, Richmond, Va.
75 Abortion, with Special Reference to Treatment. R. L. Ralford, Conley, Va.
76 Practical Points About Administration of Ether Anesthesia. F. S. Cary, El Paso, Texas.

Therapeutic Gazette, Detroit, Mich.

February

77 Treatment of Ureteral Calculus by Visceral Drainage. B. Robinson, Chicago
78 *Tincture of Veratrum Viride (Norwood). J. S. Todd, Atlanta, Ga
79 The Art of Right Living. R. S. Tyrrell, Toronto, Canada
80 *Insomnia. Its Pathogenesis and Treatment. A. Gordon, Philadelphia

78. This article will be abstracted in the Department of Therapeutics.

80. **Insomnia.**—Gordon says that whether any of the theories advanced as to sleep are accepted or not, the mechanism of sleep remains as yet problematic. The theories do not explain with certainty why cerebral anemia or hyperemia exists, why the neurones become retracted, why toxins accumulate periodically in the tissues. Sleep may be normal or pathologic. To the latter belong narcolepsy, lethargy, somnambulism, night terrors and sleeping sickness. Insomnia may be total or partial. The author considers the conditions in which insomnia occurs under the following groupings: Organic or functional disorders of the nervous system; psychoses; intoxications; infections; visceral diseases; general state of nutrition; painful, general or local conditions; incidental causes. In the treatment of insomnia, Gordon forbids under all circumstances the taking of heavy meals at night. Sweets should be avoided, as should all stimulants, including tea and coffee; tobacco should be reduced to a minimum or abandoned; at any rate, there should be no smoking in the evening. Constipation must be remedied; a hot lukewarm bath of half an hour's duration before retiring is useful and may be repeated if necessary. Wrapping the patient in a sheet wetted in tepid water for one minute, or a cold wet towel placed on the neck, placing the feet in hot water for fifteen minutes, sometimes succeeds. Cases due to extreme sorrow or persistent mental preoccupation are often rebellious. In these cases some form of psychotherapeutics may be useful. Until these various measures have failed medication should not be resorted to. Among drugs ten grains of sodium or strontium bromid every two hours may be repeated. Veronal 5 grains, with codein 1/8 grain every hour for two or three doses is a good hypnotic. In insomnia from painful conditions, removal of the cause is of course the first measure. Sometimes a state of exhaustion follows, resulting in wakefulness. A tepid bath of from 15 to 30 minutes' duration is recommended. The author discusses insomnia depending on general nutrition, visceral and infectious diseases, and intoxication, also in organic nervous diseases. Insomnia and hysteria require vigorous measures. Removal of stimulants, avoidance of all excitement, hydrotherapy when a marked emotional state exists, isolation and confinement to bed are called for. Gordon also discusses insomnia occurring in the insanities.

Cleveland Medical Journal

February

81 Medical Cleveland in the Nineteenth Century. H. E. Henderson, Cleveland.
82 Recollections of the Early Days of Cleveland Medical College. J. C. Reeve, Dayton, Ohio
83 Modern Treatment of Tuberculosis of the Spine. R. W. Lovett, Boston.

discusses Malta or Mediterranean fever, which occurs also in other parts of the world—Africa, India, Hong Kong—and in which he does not put any confidence in serodiagnosis. He reports a case in which he submitted the blood for examination to two laboratories, for diagnosis between recurrent middle-ear disease and Malta fever. The first laboratory reported Malta fever and not typhoid fever; the second reported typhoid and not Malta. He finally went to the fountain head, Professor Wright, who reported that there was no typhoid and no Malta fever. Manson further discusses relapsing fever, trypanosomiasis, kala-azar,. elephantoid fever, and leprotic fever. It is important to remember that elephantiasis and leprosy are both liable to be acompanied by fever.

Journal of Obstetrics and Gynecology of the British Empire, London

February

21 Rosslin's "Rosegarten"; Its Relation to the Past (the Muscio Manuscripts and Soranos), Particularly with Regard to Podalic Version (concluded). E. Ingerslev.
22 Pre-Maternity Hospital Practice: Thirty Cases of Morbid Pregnancy Treated in the Royal Maternity Hospital, Edinburgh. J. W. Ballantyne.
23 What is the Pelvic Floor? A Criticism; in which the Position of the Urinary Bladder During the Latter Months of Pregnancy and During Labor is Considerd. R. H. Paramore.

Intercolonial Medical Journal of Australasia, Melbourne

January

24 Two Hundred Cases of Appendicitis. R. A. Stirling.
25 Two Cases of Subperiosteal Bone Implantation. R. H. Russell.
26 **Operative Treatment in Fracture of the Base of the Skull.* D. M. Morton.
27 Chloroform in Anemia. R. T. Sutherland.
28 *An Analysis of 5,000 Cases of Diseases of the Skin Occurring in Australasia.* A. W. F. Noyes.
29 Case of Loss of Memory. W. A. T. Lind.
30 *The Appendiculo-Ovarian Ligament and Retroversion of the Uterus.* G. Horne.

26. **Fracture of Base of Skull.**—Morton considers that in a considerable number of cases of fracture of the base of skull, *in which recovery seems hopeless, operative treatment not* only offers a prospect of life, but, from its almost complete freedom of risk, is due to the patient. The *immediate danger* after severe head injury arises usually in compression from extravasated blood. Morton quotes Cushing, *in* Keen's "Surgery," and says that it is due to the patient in every grave head injury, especially *basal fractures. to be promptly placed under* the closest supervision, and probably in most cases promptly subjected *to the safer course of operative interference,* rather than to the hazardous expectant treatment. It might be *safely laid down that. in all cases of severe* head injury—whether the diagnosis of fracture of the base is made or not—associated with *grave or increasing symptoms* of compression, a decompressive operation should be promptly resorted to. *In the absence of symptoms indicative of* hemorrhage from *the middle meningeal artery.* or of *other focal symptoms,* and in *probably* all cases of *fracture* of the base of the skull, the occipital route will give easier and safer access, and more efficient drainage than the temporal route, as preferred by Cushing.

Annals of Tropical Medicine and Parasitology, Liv

February

31 *Treatment of Experimental Trypanosomiasis* Nierenstein and J. L. Todd.
32 An Unusual Case of Goundou. R. W. Orp
33 Subdrainage as Applied to *the Antimalarial* Camp Isthmus of Panama. H. Simms.
34 A New Culicid Genus. F. V. Theobald.
35 The Inflicted Talipes of the Chinese. F. Jeans.
36 *Porocephalus Moniliformis.* A. Broden and J. Rodhain.
37 A New Human Nematode, *Strongylus Gibsoni.* J. W. W. Stephens.
38 The Supposed Occurrence of *Filaria Immitis* in Man. J. W. W. Stephens.
39 A New Porocephalus. *(Porocephalus Cercopitheci).* A. Breinl and E. Hindle.
40 Comparative Chemotherapeutic Study of Atoxyl and Trypanocides. M. Nierenstein.
41 Chemical Notes on Atoxyl. M. Nierenstein.
42 Sur le rôle des Tabanides dans la Propagation des Trypanosomiases. E. Sergent.

Annales de l'Institut Pasteur, Paris

January, XXIII, No. 1, pp. 1-95

43 Histo-physiologic Study of *Aseptic Autolysis* of the Liver. L. Launoy.
44 *Research on Typhoid Fever. H. Dunschmann.
45 The Blood in Experimental Trypanosomiasis. (Action sur la formule hémato-leucocytaire dans la trypanosomiase expérimentale du traitement par l'émétique.) M. Leger.
46 Biochemical Study of Two Anaërobes of Intestine Content. A. Berthelot.
47 Biologic Study of *B. perfringens* and *B. putrificus.* W. Korentchevsky.

44. **Diagnosis of Typhoid.**—Dunschmann reports considerable research which has shown to his satisfaction that the prompt*est and most reliable means* for early diagnosis of typhoid fever is to make cultures from the blood during the first week *of the disease. He states that* the usual bile or Conradi technics should be regarded as obsolete now, the addition of *sodium taurocholate to the* peptonized bouillon being much more effectual. This technic has the further advantage that *the taurocholate prevents coagulation of the blood.*

Annales de Médecine et Chirurgie Infantiles, Paris

February, XIII, No. 3, pp. 73-108

48 Functions of the Tonsils and Organotherapy of Disturbances. (Fonction amygdalienne.) J. Glover.
49 Asystoly in Children. (Asystolie chez les enfants.) A. Moussous.
50 *Edema and Anasarca in Infants. P. Lereboullet and A.-P. Marcoreles.

50. ***Edema and Anasarca in Infants.***—Lereboullet reports five cases of edema and anasarca in infants, cured by specific treatment in one case evidently the result of inherited syphilis. In another case the trouble was traceable to a liver affection, and in another to septicemia. The other cases demonstrate that edema and anasarca are liable to result merely from gastrointestinal disturbance, even when it is apparently mild. The anasarca of digestive origin is the result of well-defined lesions in the organs involved for which the gastrointestinal affection is primarily responsible. As a rule, by the time the anasarca has developed it is too late to arrest the consequences. In this respect the prognosis is much graver in infants than in older children and in adults. Although the gastrointestinal trouble may be regulated, the damage done is already irreparable.

Bulletin de l'Académie de Médecine, Paris

February 9, LXXIII, No. 6, pp. 203-217

51 Medicine Among the Natives of Sumatra. (La Médecine des Bataks.) Kermorgant.

Obstétrique, Paris

II, N. S., No. 1, pp. 1-80

52 *Serodiagnosis of Syphilis in the Pregnant and in New-Born Infants. P. Bar and R. Daunay.
53 **Difficulties of Repeated Cesarean Section on the Same Patient.* A. Brindeau.
54 Two Cases of Twin Pregnancy with Single Ovum. (Grossesse gémellai *univitelline avec amnios unique* et cordons noués.) G. lin.

52. **Serodiagr f Syphilis in Pregnant Women and New-**
Born Infants nd Daunay have applied the Wassermann
test to 8 women and tabulate the findings. Nega-
tive btained in several *cases of unmistakable*
sy egative findings do not justify the assump-
man is free from syphilis. But a positive
es where trypanosomiasis is not prevalent,
lusion that the woman is infected. Their ex-
hat the *proportion of positive findings* is much
vomen have been properly treated. A positive
e accepted as the proof of active syphilitic in-
in the woman or the fetus, or both, requiring
ent. The article is to be continued.

Hender-
cal College.
Spine. R. W.

d Cesarean Section in the Same Woman.—Brindeau has one a second Cesarean section on six women. The operation is more serious on account of the liability to adhesions and weakening of the wall of the uterus. He advises cutting out the old cicatrix and sterilizing the woman if the uterine walls are abnormally *thin, but not otherwise.*

Presse Médicale, Paris

February 13, XVII, No. 13, pp. 105-120

55 Operative Indications with Uterine Fibromas. J.-L. Faure.
56 *Hordenin* Sulphate in Therapeutics. J. Sabrazès and G. Guérive.
57 Hitherto Undescribed Tropical Febrile Affection. (Une fièvre des pays chauds non encore décrite.) M. Crendiropoulo.
58 New Methods of Electric Treatment of Traumatic Muscular Atrophy. *Delherm and Laquerrière.*
59 Typhomalaria in Palestine. E. Arab.

February 17, No. 14, pp. 121-128

60 *Ichthyosis and Thyroid Anomalies. E. Weill and G. Mouriquand.
61 Difficulties of Diagnosing Incipient Coxalgia. J. Calvé.

February 20, No. 15, pp. 129-136

62 Gastrointestinal Disturbances in Incipient Scarlet Fever. (Les troubles gastrointestinaux du début de la scarlatine.) C. Lesieur and L. Baur.
63 Necessity for Restriction of Tea, Coffee and Chocolate with Excess of Uric Acid in the Urine. A. Martinet.

60. **Thyroid Treatment of Ichthyosis.**—Weill and Mouriquand report in detail two cases of congenital ichthyosis in which the connection between the affection and defective functioning of the thyroid was plainly apparent. The first patient was a child with congenital ichthyosis and signs of latent myxedema. Thyroid treatment was commenced at the age of five months; in two months the ichthyosis had mostly subsided and in two months still later it had entirely disappeared. The thyroid treatment was then suspended and a preparation of arsenic given, when the ichthyosis returned, but yielded again to resumption of thyroid treatment which the child seemed to tolerate perfectly. All evidences of myxedema had likewise vanished and the child is now normally intelligent and lively. A second child born later also presented the congenital ichthyosis. The effects of thyroid treatment were equally evident in the second case reported, in which there were also signs of myxedema and a mongolian aspect. In conclusion, they review a number of cases from the literature in which the ichthyosis coincided with total absence of the thyroid or destructive lesions in the gland or with symptoms indicating defective or perverted thyroid functioning. Bourneville has encountered five cases of ichthyosis in children with myxedema. In another group of cases the connection between the ichthyosis and the thyroid was evidenced only by the prompt cure under thyroid treatment. Weill is convinced that certain cases of ichthyosis ascribed to inherited syphilis were really of thyroid origin, the thyroid lesion being possibly secondary to the syphilis. He believes that sufficient data are at hand to demonstrate the influence of the thyroid on the nutrition of the subcutaneous cellular tissue (myxedema) and of the derma (scleroderma in exophthalmic goiter and in myxedema). It is logical, therefore, to ascribe a similar influence to it in the development of the superficial layer of the skin, so that disturbance in thyroid functioning may possibly entail ichthyosis.

Revue de Chirurgie, Paris

February, XXIX, No. 2, pp. 229-444

64 *Treatment of Aneurisms at the Base of the Neck by Simultaneous Ligation of the Right Common Carotid and Subclavian Arteries. Ligation of Thoracic Aorta. A. Guinard.
65 *Radical Operation for Cancer of the Biliary Passages. (Cancer des voies biliaires.) E. Quénu.
66 *Results of Hyperemic Treatment. (Quelques résultats de la méthode de Bier.) R. Dupont.

64. **Treatment of Aneurism in the Neck.**—Guinard reviews the various methods of treating aneurisms of the base of the neck and commends simultaneous ligation of the carotid and subclavian on the right side, commencing always with the carotid. He says that the aneurism can be pushed to one side if it hides the vessels to be ligated. Silk or catgut can be used, and drainage is not necessary unless the operation has been particularly long and difficult. His experience with fifteen cases has shown, he asserts, that this technic is simple and harmless. This method of treatment is applicable for all aneurisms at the base of the neck, whether on the ascending portion of the aorta to the right or on the subclavian or common carotid. The results are better, the greater the distance between the aneurism and the heart. The symptoms in respect to the pulse, sphygmography and compression of neighboring organs are deceptive, but radioscopy may render good service. Recent statistics in regard to aneurism of the innominate artery or its branches report 100 per cent. operative cures. In conclusion, Guinard relates a case of aneurism at the left end of the arch of the aorta in which the patient insisted on operative intervention as the last resort. He ligated the aorta below the aneurism, which was very easily done. As the ligature was drawn tight the femoral pulse stopped at once and the lower part of the body grew pale and cold, but in less than fifteen minutes circulation became re-established and the parts grew warm again. The upper part of the trunk and the head began to sweat profusely, suggesting that the kidneys were not working properly and that uremia was impending. This proved to be the case, and the patient succumbed to total anuria, the result of the reduction in the blood pressure in the renal arteries. After ligation of the aorta in the thorax the intercostal anastomoses were sufficient to supply the abdominal aorta and the legs with blood, but the physiologic functions of the kidney, requiring a considerable degree of blood pressure in the renal arteries, were totally arrested by the reduction in the intra-arterial pressure. This is the reason why ligation of the aorta above the renal arteries proves inevitably fatal.

65. **Cancer of the Biliary Passages.**—Quénu presents the balance-sheet of these operations and discusses the different types in detail. He knows of only a single case of permanent cure, and the limitation of the cancer seems to be the only justification for intervention. He adds that until we can differentiate circumscribed cancer of the common bile duct or of the ampulla of Vater, chance alone will reveal the really operable cases and yield an exceptional success.

66. **Hyperemic Treatment of Surgical Tuberculosis.**—Dupont reports fourteen cases in which Bier's various hyperemic measures were employed. Bier's technic was followed in every detail except that treatment was not kept up so long as he advises. The results were only fair or uncertain, and seem to show that while constriction hyperemia is harmless and may be useful in "open" tuberculosis, it is dangerous in the "closed" cases.

Archiv für Gynaekologie, Berlin

LXXXVII, No. 2, pp. 233-495. Last indexed Jan. 30, p. 422

67 *Operative Treatment of Uterine Carcinoma. A. Scheib. Commenced in No. 1.
68 *Uterine Carcinoma and its Metastases in Pleura and Lungs. H. Offergeld.
69 *Uterine Carcinoma and its Metastases in the Abdominal Cavity. (Die Metastasen in der Bauchhöhle beim Uteruscarcinom.) Id.
70 Activity of Ovary during Pregnancy. (Thätigkeit des Ovariums in der Schwangerschaft.) O. O. Fellner.
71 *Prognostic Importance [illegible] ation in Abdominal Removal of [illegible] C. Barth.
72 Corpus Luteum and [illegible] the Human Ovary, and their Cys [illegible]
73 Carcinosarcoma of the Uterus. H. Forssner.
74 Hemolysis by Streptococci during Pregnancy and Puerperium. W. Sigwart.

67. **Uterine Carcinoma.**—Scheib comments rather pessimistically on the chances of cure of uterine cancer when the lymph nodes in the region are already involved. Even when the operation is extremely extensive, the outcome is not much better than without. Extensive abdominal operation is liable to give results unattainable with simple vaginal extirpation in cases of carcinoma of the cervix involving adjoining tissue or the vagina. The mortality of the most extensive operations does not seem to be any higher than with the less mutilating, and will undoubtedly be still further reduced. His article is based on the experiences with uterine cancer at Kleinhans' clinic at Prague; this material is classified and analyzed from various points of view, especially the remote results, and compared with the reports from other clinics.

68. **Metastasis of Uterine Cancer in Pleura and Lungs.**—Offergeld states that study of the literature has shown that metastasis in the lungs of uterine carcinoma is encountered in from 5 to 7 per cent. of all cases, but does not cause symptoms. The metastases are generally found in the central tissue and the marginal portions of the lower lobe, similar to the location of infarcts. Metastasis in the pleura is much rarer, and occurs only in advanced stages of uterine cancer.

69. **Metastasis of Uterine Carcinoma in the Abdomen.**—Offergeld summarizes his study of this subject in the statement that secondary nodules may develop in the peritoneum even during the early phases of uterine carcinoma, but, as a rule, this does not occur until an advanced stage. The favorite points for them are in Douglas' cul-de-sac and the vault of the diaphragm. He does not attempt to determine whether these nodules are secondary or merely indicate a primary multiplicity of the cancer. The secondary nodules in the omentum and muscles of the intestinal tract are of lymph-borne origin. They may cause a tumor with peritonitis and stiffening of some part of the intestine, but they usually de-

ures the swollen glands may subside, but if not, a radical operation should follow, bearing in mind that cervical glandular tuberculosis is almost invariably a strictly local process spreading merely from the primary source to the peripheral group of connected glands where the process is kept circumscribed. But as each gland involved is a menace to the entire organism, the aim should be to remove every particle of infected matter. Systematic radical extirpation in general anesthesia should be the rule; from 50 to 60 per cent. of the patients thus treated have been permanently cured to date and this proportion is constantly increasing. He gives illustrations of the connections between different groups of glands in the region, and insists particularly on the importance of operating in such a clean manner that the wound does not become infected with diseased tissue. The low "collar incision" permits ample access while it leaves less disfigurement than other technics.

Fortschritte der Medizin, Leipsic

February, XXVII, No. 4, pp. 145-192

120 Practical Importance of Serodiagnosis of Syphilis. (Praktische Bedeutung der Wassermann'schen Syphilisreaktion.) W. Hancken.
121 Treatment of Pulmonary Tuberculosis with Cinnamic Acid. (Indikationen und Technik der Hetoltherapie.) R. Weissmann. Commenced in No. 3.

Jahrbuch für Kinderheilkunde, Berlin

February, LXIX, No. 2, pp. 129-250

122 *Clinical Importance of Elimination of Phosphates in Urine of Infants. (Die klinische Bedeutung der Phosphorausscheidung im Harn beim Brustkind.) L. Moll.
123 Eosinophiles and Opsonic Index in the Exudative Diathesis. H. F. Helmholz.
124 *Ac [illegible] the Various Stages of Food [illegible] ingers in den verschiedenen [illegible] L. F. Meyer and J. Rosenstern.
125 Infant Mortality in [illegible] (Die geographische Verteilung [illegible] im Königreich Bayern in den Ja[illegible] Ursachen.) W. Hoerner.
126 Tumor on Frenum of Tongue. (Die Riga-Fedesche Krankheit.) M. Abetti.
127 Sarcoma of Adrenal in Infant. (Kongenitales Sarkom der Nebenniere bei einem achttägigen Kinde.) W. P. Shukowsky.

122. **Excretion of Phosphoric Acid in Infants' Urine.**—Moll presents evidence to show that the healthy infant does not excrete phosphoric acid in the urine to any appreciable extent, but that digestive disturbances are at once followed by increased elimination of phosphates. The phosphate content in the urine is thus an early and reliable sign that distinguishes the sick child even before any other signs have attracted attention to the derangement. Moll's research is especially valuable as it includes the findings in enough healthy children to establish a standard. The article is to be continued.

124. **Influence of Deprivation of Food in Various Stages of Food Intoxication.**—Meyer and Rosenstern report from Finkelstein's clinic at Berlin that the effect of putting a child with alimentary intoxication on a starvation diet varies within a wide range according to the stage of the digestive disturbances. During the early stages the effect is beneficial in the highest degree, but when the child is debilitated from long chronic dyspepsia, the starvation diet may aggravate conditions to such an extent that the child succumbs even to one day of it. They give detailed descriptions with tracings of typical examples of each of these classes of cases. In the second class, the starvation diet—restriction to weak tea for twenty-four hours—was followed by permanently subnormal temperature and slowing of the previously normal pulse. It is important, therefore, before putting the child on the tea diet to ascertain whether it is a healthy child suffering from acute dyspepsia and food intoxication, in which case great benefit will be derived from temporary suspension of food. The pulse of the infant asleep is about 120, the range being from 100 to 130 a minute. When awake, the pulse varies within a very wide range. The temperature at 6 a. m. and at 4 p. m. gives a nearly horizontal tracing, varying only from 36.8 to 37.2 C. (98 to 99 F.) in health. The chronically ailing infant, on the other hand, is inclined to subnormal temperature from 36 to 36.8 C. (96.8 to 98 F.) and pulse rate of from 66 to 100, averaging only 86 or 90. If such a child is restricted to weak tea for a day the temperature and pulse drop still lower and the aggravation of the condition may prove fatal in these cases in which the preceding protracted dyspeptic disturbances have modified the general condition with resulting functional insufficiency of the tissues.

Medizinische Klinik, Berlin

February 14, V, No. 7, pp. 236-268

128 *Treatment of Affections of Cornea. (Therapie der Hornhautaffektionen.) Wiedemann.
129 Relations between Female Generative Processes and Chole-lithiasis. J. Hofbauer.
130 *S[illegible] during Years Immediately Follow[illegible]ung der Wassermannschen Reaktion [illegible]d der ersten der Infektion folgenden [illegible] and Roscher.
131 *Symptoms Suggesting Appendicitis during Lobar Pneumonia. H. Bennecke.
132 Mechanical Regulation of Heart as Method of Exercising it in Heart Disease. (Uebungstherapie bei Herzkranken.) M. Fisch.
133 Choked Disc. (Zur Theorie der Stauungspapille.) W. Thorner.
134 Cultivation of Serum-fast Strains of Trypanosomes. (Herstellung von serumfesten Trypanosomenstämmen.) M. Jacoby.

130. **Serodiagnosis of Syphilis Soon After Infection.**—Blumenthal and Roscher report experience with the Wassermann test applied to 231 patients, 207 of whom presented signs of syphilis, while 4 of the others were "suspects." They found that the reaction is always negative until the sixth or eighth week and then it gradually increases in intensity until the course of the disease is modified by mercurial treatment. During the active secondary stage the reaction was invariably positive. In the few cases in which the first test was negative, a repetition gave strongly positive findings. The influence of mercurial treatment was evident but not always distinct; even especially energetic measures did not always succeed in abolishing the reaction. The duration of the courses of treatment should not be determined by the findings of this test. In some cases the findings, negative at first, became positive under mercurial treatment. They do not think that the reaction during the first year following the infection has any significance for the prognosis. The varying findings in one and the same patient, the occurrence of new manifestations after negative findings, and the development of positive findings when treatment was commenced during a latent phase—all this shows the inadvisability of omitting or suspending treatment on the basis of a negative response to the test.

131. **Appendicitic Symptoms in Pneumonia.**—Bennecke states that in two of the twenty-one cases of lobar pneumonia with symptoms suggesting appendicitis, an operation was undertaken for the supposed appendicitis. His experience confirms the strange fact that pneumonia in the right upper lobe is most liable to be accompanied by these peritoneal and abdominal symptoms. These twenty-one cases were encountered in 99 cases of lobar pneumonia in the last few years. In only eight of the twenty-one was the course of the pneumonia of the ordinary type; in the others it was comparatively brief or otherwise atypical.

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena

XIX, No. 4, pp. 553-736. Last indexed Jan. 2, p. 83

135 Tuberculoid Changes in Peripheral Nerves in Lepra nervorum. H. Shiota.
136 Sensibility of Abdominal Organs. (Sensibilität der Bauchorgane.) L. Kast and S. J. Meltzer (New York).
137 Lesions in Pancreas and Liver in Relation to the Chromaffine System. S. Kostlivy.
138 Necrosis of the Pancreas and Chronic Pancreatitis. O. Hess.
139 *Experimental Research on Influence of Trauma on the Heart. (Herz und Trauma.) Külbs.
140 *Foreign Body Pseudotuberculosis of Peritoneum. (Zur Fremdkörpertuberkulose des Peritoneums.) M. Brandes.
141 *Case of Inflammatory Thrombosis of almost Entire Peripheral Venous System. ("Springende Thrombosen"; "Thrombophlebitis migrans.") K. Försterling.

139. **The Heart and Trauma.**—Külbs has been making an experimental study of the importance of trauma in the development of heart affections, and summarizes the results in the statements that extensive injury of the heart almost invariably followed slight contusion of the thorax, even when the skin and thorax wall showed no special changes. The injury induced hemorrhages, most frequently in the valve tissue, but sometimes in the myocardium and pericardium. The hemorrhage in the valves was generally reabsorbed; in the muscle it was followed by production of connective tissue. The

hemorrhage at the base of the valves sometimes extended far into the muscle and left a material defect. It was remarkable that even when gross anatomic changes were found at autopsy, auscultation and the pulse frequently gave no hint of cardiac insufficiency during life. The elasticity of the thorax is evidently an important factor in determining the extent of the injury from the trauma. His experiments were made on thirty-four dogs; the details are given in tabulated form for comparison.

140. Foreign Body Pseudotuberculosis of the Peritoneum.—Brandes refers to the granulation tissue which forms around small foreign bodies finding their way into the peritoneum, the nodules thus formed deceptively simulating true tuberculosis. He reviews the history of this pseudotuberculosis and reports a case in which a man of 43 was operated on for perforation of a gastric ulcer. The abdominal cavity was mechanically cleansed of remains of food, and recovery was uneventful for three weeks. Then signs of gangrene of the lung developed, proving fatal in six weeks. The lung trouble was probably the result of particles of food getting into the air passages, as the patient had suffered from persistent hiccough for several days. Autopsy revealed a number of nodules in the peritoneum suggesting tuberculosis, but proving to be the walling off of particles of food left behind at the operation. The patient had complained of digestive disturbances for a few months and the perforation occurred immediately after a hearty meal of bean soup. This case is the fourth on record of "foreign body tuberculosis" after perforation of a gastric ulcer in adults. In this case the pseudotubercles were scattered over the entire abdominal cavity. The facts observed demonstrate that fatal peritonitis is not the inevitable outcome of perforation of the stomach, even when full of food. An early laparotomy may save the patient, or there may be a spontaneous cure by walling off of the particles of food by a natural formation of nodules which may simulate the lesions of tuberculosis or carcinosis. In conclusion, Brandes refers to a recently reported Russian case in which the abdominal cavity was found studded with subserous "tubercles" fourteen months after a firearm injury of the intestine. Each tubercle contained remains of vegetable matter encircled by giant and other cells, mostly fibroblasts and polyblasts—a typical example of this spontaneous encapsulation of particles of food escaping from the intestine into the peritoneum after the bullet wound. Recurrence of abdominal pain led to a laparotomy fourteen months after the primary injury, when the microscope was the only means of excluding tuberculous peritonitis.

141. Multiple Thrombosis.—Fösterling's patient was a young fireman of 24, previously healthy and robust until suddenly affected with thrombosis in the veins of both calves, then of the arms and later in turn of almost the entire peripheral venous system. In the course of these disturbances signs of pyloric stenosis became evident and relief was obtained by a gastroenterostomy, but the stomach trouble proved to be of malignant nature and the young man succumbed to metastasis in less than a year from the first symptoms of thrombosis. Fösterling compares the case with others of multiple thrombophlebitis in the literature. In only three cases did the extent of the thrombosis compare with his case, and none equalled it. His patient's blood was apparently normal in every respect, but the malignant disease must have existed prior to the first symptoms in the veins, and it is possible that the walls of the veins may have been exceptionally susceptible to the poisons generated by the cancer.

Münchener medizinische Wochenschrift

February 16, LVI, No. 7, pp. 321-376

142 *What is to be Learned from Clinical Measurement of Blood Pressure? (Was erfahren wir durch unsere klinischen Blutdruckmessungen beim Menschen?) F. Moritz.
143 *Distribution of Trichinæ. (Verbreitungsart der Trichinelle.) C. Stäubli.
144 *Practica[illegible] f Syphilis for Surgical [illegible] rmannschen Serum-Reakt. [illegible] der chirurgischen Syphi[illegible] Baetzner.
145 Eleven Cases of Congenital Dislocation of Hip Joint Hard to Cure. (Demonstration schwierig zur Heilung gebrachter Fälle von angeborener Hüftverrenkung.) P. Bade.
146 *Affections of Musculature of Bladder. (Erkrankungen der Harnblasenmuskulatur.) P. Asch.
147 *Fat-Zwieback Test Breakfast for Estimation of Motor Functioning of Stomach. (Die Strauss-Levasche Motilitätsprüfung des Magens mittels des Fettzwiebackfrühstücks.) E. Schenck, F. Tecklenburg and Dappers.

142. Practical Value of Clinical Measurements of the Blood Pressure.—Moritz is a pioneer in this line, and here states that the limits of solid knowledge are comparatively narrow, but that within these limits the measurement of the blood pressure has proved an important aid for diagnosis and for prophylaxis and treatment.

143. Trichinosis.—Stäubli has found that the trichina is comparatively frequent in rats, but that it soon kills them so that swine are the main source of infection. He is convinced that trichinosis is more common than is generally believed; but that it passes unrecognized, the patients complaining only of vague rheumatic disturbances.

144. Serodiagnosis of Surgical Syphilis.—Baetzner reports 25 cases which sustain the practical differential value of the serum reaction. It is disappointing in that it does not locate the lesion in any special organ, while at the same time negative findings are sometimes encountered in unmistakable syphilis.

146. Affections of the Musculature of the Bladder.—Asch has encountered eleven cases of enlarged trabeculæ in the bladder which there was nothing to explain. Seven of the patients were women, and the symptoms were frequent tenesmus, occasional pain and dribbling of urine. He ascribes the trouble to atrophy of part of the bladder musculature, the trabeculæ becoming enlarged as a compensating hypertrophy. He has cured the subjective symptoms in these cases by a kind of massage, stimulating the musculature to contract by injecting a hot solution of boric acid into the bladder under high pressure.

147. The Fat Zwieback Test Breakfast for Estimating the Motor Functioning of the Stomach.—The principle of the Strauss and Leva fat zwieback breakfast is to test the motor activity of the stomach by ingestion of a given amount of a substance which the stomach merely passes along and does not attempt to digest. The substance ingested must also resist fermentation processes. These conditions are realized with a given amount of zwieback with a rather large proportion of butter fat. The amount remaining in the stomach an hour later shows the condition of the motor function. The test was applied in 34 cases at Treupel's clinic at Frankfurt, the findings proving very instructive. This test has the further advantage that both the chemical and the motor functioning are determined at the same time with only the one simple test. The exact technic was described in the *Zeitschrift für klinische Medicin*, Berlin, 1908, lxv, page 61.

Wiener klinische Wochenschrift

February 18, XXII, No. 7, pp. 221-256

148 Present Conception of Scrofula. (Was nennen wir Skrofulose?) T. Escherich.
149 Hepatotoxin. G. Joannovics.
150 Reactivation of Hemolytic Immune Serum by Solutions of Hemotoxins and Serums from Cold-blooded Animals. (Reaktivierung von hämolytischem Immunserum durch Lösungen von Hämotoxinen und durch Kaltblutersera.) K. Landsteiner and J. Fürth.
151 Incarcerated Hernia in Ileocecal Recess. (Hernia recessus ileocoecalis incarcerata.) P. Preindlsberger.
152 Intramuscular Inguinal Hernia. V. Schiller.

Zeitschrift für klinische Medizin, Berlin

LXVII, No. 4, pp. 253-348. Last indexed Jan. 30, p. 427

153 *Influence of Temperature of Body on Sugar Content of Blood. (Einfluss der Körpertemperatur auf den Zuckergehalt des Blutes.) H. Senator.
154 Amebic Dysentery. Huber.
155 *Primary Neoplasms of the Heart. (Klinik der primären Neubildungen des Herzens.) R. Link.
156 Metabolism of Phosphoric Acid and Lime in Healthy Adults. (Phosphorsäure- und Kalkstoffwechsel beim erwachsenen, gesunden Menschen.) F. Oeri.
157 Bence-Jones' Albumosuria. A. v.Decastello.

153. Influence of Temperature of Body on Sugar Content of Blood.—Senator states that the proportion of sugar in the blood became very much increased in rabbits when they were kept in a hot place—once at a temperature of 109 F. The proportion of sugar in the blood of the carotid was 24, 32, and 156 per cent. higher than in normal rabbits. There was also an increase, ranging from 8 to 30 per cent., in rabbits after puncture of a heat center. His experiences have fully established, for rabbits at least, that raising the temperature of the body is followed by an increased proportion of sugar in the circulating blood. He discusses whether the sugar is derived from the glycogen already on hand or from increased breaking down of albumin. In infectious febrile conditions the higher temperature and increased destruction of albumin have a tendency to increase the proportion of sugar in the blood, but, on the other hand, the action of the bacteria on the glycogen and sugar content and the patient's inanition would have an opposite tendency. He comments, in conclusion, on the fact that the urine may be free from sugar even when the proportion in the blood is abnormally high, possibly up to 2.8 per thousand. This is probably due to the lesser permeability of the kidneys, the result of the febrile process. It is similar to the retention of chlorids and lime salts in certain febrile affections.

155. **Primary Neoplasms in the Heart.**—Link gives an illustrated description of a spindle-celled sarcoma, involving both auricles, in a forester of 23 the most extensive case of the kind yet published. He compares it with 2 somewhat similar cases on record commenting on the slight clinical manifestations with such extensive destruction of the heart tissue. He also summarizes from the literature 11 cases of pedunculated tumors, generally growing from the wall of the septum into the left auricle and protruding into the ventricle, all fibromas or myxomas. The symptoms were those of mitral insufficiency or stenosis. In 2 other cases the primary tumor was located in the right ventricle; the patients were men of 32 and 37 and the symptoms were those of angina pectoris, with sudden death; in a third similar case the symptoms merely suggested increasing cardiac insufficiency. A fourth group includes 2 cases of carcinoma in both ventricles or in the aortic valve. An important sign of cancer in such cases is a hemorrhagic pericardial fluid if tuberculosis, scorbutus and trauma can be excluded. Link does not include in his review any cases of gumma of the heart or secondary tumors, but has succeeded in compiling a table of 91 cases of primary tumors. The list includes 10 in the right and 24 in the left auricle, 14 in the right and 8 in the left ventricle, 16 in valves, 3 in both auricles, 2 in both ventricles, 2 involving the entire right and 2 the entire left side of the heart, with 2 each in the septum between the auricles and the ventricles. Only 23 of the cases listed have more than pathologic-anatomic interest, as clinical data are lacking in the rest. The diagnosis of carcinoma is given in several cases in infants and older children, but with a query. A spindle-celled sarcoma was found on the aortic valve in a girl of 7, who had died suddenly. All ages, from birth to 81, are represented in the list.

Zentralblatt für Chirurgie, Leipsic

February 20, XXXVI, No. 8, pp. 249-288

158 Modification of Bassini Operation, especially for Large Hernias. A. Caminiti.
159 Implantation of Hepatic Duct in Jejunum. (Neue Operation an den Gallenwegen.) R. Dahl.

Zentralblatt für Gynäkologie, Leipsic

February 20, XXXIII, No. 8, pp. 265-296

160 Evidence against Placental Origin of Eclampsia. Lichtenstein.
161 *Extraperitoneal Cesarean Section. (Extraperitonealer Kaiserschnitt.) W. Latzko.
162 Catheter for Rinsing the Bladder. (Neu konstruierter Blasenspülkatheter.) S. Higuchi.

161. **Extraperitoneal Cesarean Section.**—Latzko's technic is so simple that in one of the three cases reported the whole operation was completed in 20 minutes. The principal advantages are that it is applicable to infected cases and that the operation proceeds with greater ease the longer labor has lasted, so that the obstetrician can calmly wait to give Nature every possible chance to complete the delivery unassisted. The bladder is partly filled and, after the incision on the median line, the bladder is drawn towards the right—the bladder being always naturally pushed rather to this side toward the close of pregnancy. It is easily separated from the enlarged cervix. The reflected portion of the peritoneum is pushed upward and the bulging cervix is easily incised. His technic was applied April 26, 1908, and reported May 8. It has the advantage which is possessed by both the Frank and Sellheim I methods, he says, while in addition it excludes all the danger of injury of the peritoneum.

Riforma Medica, Naples

February 8, XXV, No. 6, pp. 141-168

163 Tumors of the Base of the Brain. (I tumori della base dell'encefalo.) G. Rummo.
164 Relations between Kidneys and Adrenals. (Reni e capsule surrenali.) A. Baduel.

February 15, No. 7, pp. 169-196

165 Tumors of Base of Brain. (I tumori della base dell'encefalo.) G. Rummo.
166 *Paratyphoid Infection. (Febbricole da bacillo paratifoso.) L. Ferrannini. Commenced in No. 6.

166. **Paratyphoid Infection.**—Ferrannini concludes his long experimental and clinical study of this subject with the statement that paratyphoid infection is not always so mild as generally assumed. In about 200 cases on record there were 12 deaths, but of dubious explanation in 5 instances. His experience has shown that paratyphoid fever may persist for months with a pertinacity recalling Malta fever. On account of the lesser involvement of the digestive tract it compares favorably with typhoid. It is unnecessary to restrict the patient to a liquid diet, and this is the principal reason why it is so important to differentiate it from typhoid. The prophylaxis should be the same as for typhoid, with special care to refrain from the use of suspicious meat. The lingering fevers are of various etiology and differentiation is possible only with bacteriologic examination and serum reaction. The fever may be the work of the Bruce micrococcus, the paratyphoid or typhoid or colon bacillus or of the malaria germ or tubercle bacillus or of some still other infection. The varied clinical picture is the result of association of different infections, a bacterial symbiosis which modifies the differential characteristics of the single infections.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

DYKE'S COMPLETE COURSE OF AUTOMOBILE ENGINEERING. Consisting of one cloth bound book of 325 pages, with 220 illustrations, entitled DYKE'S TROUBLES, REMEDIES AND REPAIRS OF THE AUTO AND GASOLINE ENGINE. Also 24 paper pamphlets detailing the lessons. Also working models of four-cycle engine and magneto. Price, $10.00. St. Louis: Dyke's Correspondence School of Motoring, 801 Bank of Commerce Bldg.

PRACTICAL DIETETICS With Reference to Diet in Disease. By Alida Frances Pattee, *Graduate Department* of Household Arts, State Normal School, Framingham, Mass. Fifth Edition. Cloth. Pp. 358. Price, $1. Mount Vernon, N. Y.: A. F. Pattee.

TUBERCULOSIS OF THE NOSE AND THROAT. By Lorenzo B. Lockard, M.D., Laryngologist and Rhinologist to the Jewish Consumptives' Relief Society Sanatorium. Cloth. Pp. 368, with illustrations. Price, $5. St. Louis: C. V. Mosby Co., 1909.

HANDBUCH DER BIOCHEMIE DES MENSCHEN UND DER TIERE. Herausgegeben von Prof. Dr. Phil. et Med. Carl Oppenheimer, Berlin. Installments 11, 12 and 13. Paper. Price, 5 marks each. Jena: Verlag von Gustav Fischer, 1909.

APPENDICITIS and Other Diseases of the Vermiform Appendix. By Howard A. Kelly, M.D. Cloth. Pp. 502, with illustrations. Price, $6. Philadelphia: J. B. Lippincott Co.

TRANSACTIONS OF THE AMERICAN MICROSCOPICAL SOCIETY. September, 1908. Vol. xxviii. Twenty-ninth Annual Meeting Held at Ithaca, N. Y., June, 1906. Paper. Pp. 236.

NATIONAL ASSOCIATION FOR THE STUDY AND *PREVENTION OF TUBERCULOSIS*. Transactions of the Fourth Annual Meeting, Chicago, June 5-6, 1908. Paper. *Pp.* 352.

REPORT OF THE SUPERINTENDENT OF PUBLIC INSTRUCTION. Fifty-fifth Report on the Public Schools of New Hampshire. Paper. Pp. 656, with illustrations.

SEMI-ANNUAL BULLETIN OF THE KANSAS STATE CHARITABLE INSTITUTIONS *Under the Board of Control*. Vol. 1. November, 1908. No. 2. Paper. Pp. 33.

THE CENTENNIAL CELEBRATION OF THE FOUNDATION OF THE UNIVERSITY OF MARYLAND, 1907. Memorial volume. Cloth. Pp. 267, with illustrations.

THIRTY-THIRD ANNUAL REPORT OF THE MANAGERS AND OFFICERS OF THE NEW JERSEY STATE HOSPITAL at Morris Plains. 1908. Paper. Pp. 61.

REPORT OF DEPENDENCY AND CRIMES COMMISSION [of the State of New Jersey]. Paper. Pp. 23.